Barriers to Transit-Oriented Development in Mature Communities: An Assessment of South Point Douglas, Winnipeg

James Cook

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Abstract

This practicum investigates the opportunities and challenges for Transit-Oriented Development (TOD) in mature communities, urban built out areas around the City core, and along the Eastern Bus Rapid Transit Corridor in Winnipeg. The focus will be on the South Point Douglas Neighbourhood (SPD), an economically disadvantaged, mature community and an important area for the City's development.

TOD is a type of development adjacent to rapid transit stations with the goal of promoting a certain level of density and mixed-uses such as residential, retail, and recreation. TOD, which is heavily influenced by the principles of new urbanism, has been gaining traction in North America for several years. It is a form of development that can reduce urban sprawl and reliance on the automobile.

Winnipeg has also chosen a newer form of rapid transit, Bus Rapid Transit (BRT). Research on its effects is increasing, but it lacks relevant North American examples. To investigate this issue, I conducted interviews with private developers, real estate professionals and public officials to determine the perceived and actual barriers the development community faces, and to propose strategies to overcome those barriers. I also conducted a site analysis of SPD to determine the feasibility of TOD and how much capacity it can sustain.

An analysis of my findings showed that four factors were identified as potential areas of focus that could affect development in SPD: (1) Multiple zoning bylaws in the area, (2) Inconsistency in execution on the City's vision of TOD, (3) Councillors ability to oppose projects; and (4) Past success of developer incentives.

The strategies and recommendations have been tailored for SPD, however, this information will be useful to other municipalities attempting to encourage TOD in their innermost areas.

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1.0 Introduction

The City of Winnipeg has invested in bus rapid transit as their form of transit infrastructure. Starting in 2012 with the opening of the South West Rapid Transit Corridor (Phase 1), the City is currently constructing the final phase of this route and is in the early design stages of the new Eastern Rapid Transit Corridor. This study will allow city officials to study and maximize the connections between transit infrastructure and land development, and allow the City to leverage it to create more walkable communities and transform underused communities. However, with limited examples, these connections are not yet well understood in the Winnipeg context. This practicum aims to clarify the relationship between development and transit infrastructure and how the City can integrate the two effectively.

1.1 Problem statement and research questions

In an attempt to promote a minimum level of density and mixed uses, Transit-Oriented Development (TOD) has been gaining traction in North America for several years. Evidence suggests it can also reduce urban sprawl and reliance on the automobile by increasing transit ridership. TOD can also generate additional revenue for cities by capturing the increase in property value created by the desirability of the transit infrastructure. With the majority of Winnipeg's revenue coming from property taxes, capturing those premiums can assist in the financing of these projects.

Starting with a broader look at TOD in North America — its strengths, weaknesses, opportunities, and risks — this practicum contextualized those issues to Winnipeg and South Point Douglas (SPD). Specifically, this research attempted to answer three research questions:

1. What are the risks and barriers developers face when building bus rapid transit oriented developments in mature communities?
2. What are the opportunities and challenges for the City of Winnipeg in encouraging TODs at a Station Area in SPD?
3. What policy changes and incentives can the City adopt to encourage developers to build at station areas in SPD and mature communities?

1.2 Significance of Proposed Project

In 2016, Winnipeg has a population of 735,600 people, but it is expected to reach 1 million people in the next 16 years (Winnipeg - *OurWinnipeg*, 2011, P.8). As stated in Winnipeg's *Complete Communities* plan "Our projected population growth is outpacing our supply of new land for development, and for the first time in our history, we face a critical land shortage" (2011, P.2). This demand has made the existing housing supply in Winnipeg more difficult to attain, with apartment vacancies hovering just

above 1% and the average price of home in Winnipeg increasing approximately 140% over the past decade (Winnipeg, 2014, p.6). If these trends continue, finding a place to live in Winnipeg will become increasingly difficult. Encouraging the development of alternative housing projects can increase the existing housing supply while consuming less land, allowing for more housing units to be created.

Enhancing quality of life and prosperity is also a priority outlined in *OurWinnipeg*, Winnipeg's development plan and vision document for the next 25 years. "Now is the time for civic leadership to lay a stronger foundation, fix the basics, address barriers to growth, set priorities, put plans into action and improve our community and its place in the world" (2011, p.48).

Winnipeg has also chosen a newer form of rapid transit: bus rapid transit, or BRT. While research on its effects on development is increasing, there is still a lack of relevant examples in the North American context. This research investigated the attitudes and sentiments towards developing around BRT stations and contributes to a growing body of literature that can influence other municipalities when deciding which mode to use when building transportation infrastructure.

The research provides recommendations and strategies to municipalities, in particular the City of Winnipeg, to ensure that Bus Rapid Transit (BRT) Corridors can catalyze development and the revitalization of mature communities.

1.3 Document Structure

This document is structured in seven sections. The first two sections begin by introducing the context of the research problem, by discussing the City of Winnipeg's BRT network and a possible SPD station area. Section Three is a literature review of effects of transit on residential/ commercial land value and TOD. Section Four outlines the research methods used to answer the research questions in the practicum.

Section Five discusses the research findings. It will begin by summarizing the findings from the semi-structured interviews, which were based on the literature review. It will identify the contextual challenges and opportunities in Winnipeg for both private developers and public officials. Following that, I will summarize the findings of a site analysis of SPD, including physical/social challenges and its unique characteristics as an area for development.

Section Six analyzes the findings and explores the trends relating to infill/TOD development and the challenges that exist in of Winnipeg.

Finally, Section Seven revisits the research questions to answer them and draw conclusions for Winnipeg relating to policy implementation, incentive programs, and organizational changes. It also looks at further areas of study.

2.0 Context

2.1 Selection for research site

For the purposes of this project, this project concentrated on the northern alignment option going through SPD because of the research questions related to TOD in a mature community. While both alignments are still being considered, the SPD option is more in line with my project's goal to investigate barriers and opportunities for development in a mature community. Although the alignment option in St. Boniface is also a mature community, it would traverse through a park and a historical site and severely limit any opportunity for development. *OurWinnipeg* has identified SPD as an area of major redevelopment and states "Major Redevelopment Sites present large-scale opportunities to enhance Winnipeg's urban fabric by repurposing obsolete land uses as new developments." (2011, P.37). While the process to create a secondary plan started in 2008, it is currently stalled, possibly due to the alignment feasibility study. If there is renewed interest, this area has the potential to attract additional resources into the area (ibid, P.29; PP&D, 2013).

2.2 Point Douglas

The peninsula of Point Douglas is located north of Downtown along the Red River, with Main Street bordering the neighbourhood to the West (see figure 2.1). Established in 1813 as Fort Douglas by the Selkirk Settlers, it's one of Winnipeg's oldest neighbourhoods. When Manitoba joined confederation and the fort was eventually dismantled, the area was home to Winnipeg's most prestigious residents (History of North Point Douglas, n.d.).

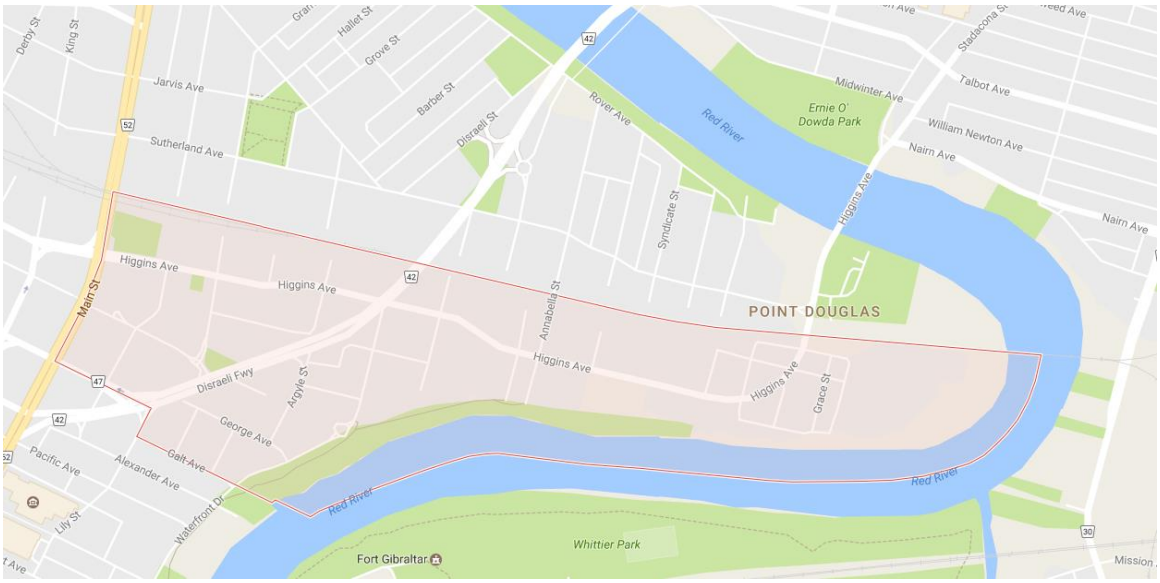

Figure 2.1. Google Map image of SPD (Google, 2017)

In 1880, when the transcontinental railway passed through Winnipeg, it bisected Point Douglas and essentially created two neighbourhoods: SPD, which became a hub of industry, and North Point Douglas, which remained primarily residential (PP&D, 2008). With this drastic transition, the wealthier residents left for other parts of the City, leaving a working-class neighbourhood behind (History of North Point Douglas, n.d.). Over the decades, as the factories in SPD relocated, the neighbourhood transitioned again into a poorer neighbourhood (ibid), where it ranks near the bottom on most social and economic factors. This includes lower personal and family annual income, higher instances of lone-female-headed households, higher rates of renting, and lower quality in dwelling conditions. It has also been decreasing in population since 1976 (ibid; Point Douglas, n.d.; City of Winnipeg, 2008; Statistics Canada, 2006).

2.2.1 South Point Douglas

SPD is located on the southern half of the Point Douglas peninsula. The majority of its' land is zoned for industrial use (primarily warehousing) and social services, with small pockets of residential and commercial buildings (City of Winnipeg's Planning, Property & Development, 2008). This has created a large number of brownfield sites, which will require extensive remediation to develop (ibid). Finally, SPD has a large inventory of historical buildings from the turn of the century. No home has been built there since 1949, and the former Canadian Pacific Railroad station now serves as the Aboriginal Centre of Winnipeg, which provides social services to the area (ibid).

2.3 Eastern Rapid Transit Corridor

This project examined Winnipeg's proposed eastern rapid transit corridor (ERTC). This corridor has been identified as the next route for rapid transit (Winnipeg TMP, 2011; BRT Initial Project Summary, 2011; Winnipeg Rapid Transit Task Force, 2005). Phase one of this route will depart from the Downtown area, over the Red River and toward Transcona, stopping near Lagimodiere Boulevard until phase two can complete the route into the middle of the Transcona community (Winnipeg TMP, 2011).

Alignment is still a factor that has to be determined in the final design. One option would take the corridor immediately over the Red River into St. Boniface and the Southern Edge of Elmwood until reaching Lagimodiere (Patman, 2014). The second option would take the corridor into SPD, where it will cross the Red River and continue through Elmwood to the terminus (SPD Secondary Plan, 2009). This option appears more likely, as the Louise Bridge has been identified as an asset needed for major repair and possible replacement (Kives, 2008; ibid, 2011). This is a cost-effective opportunity,

as the other alignments would require additional new infrastructure. The SPD option will also traverse through North Point Douglas and Elmwood, which are more residential than the first option (Neighbourhood Change, 2015).

Currently no option is being favoured more than the other due to continuing construction on the second phase of the southwest rapid transit corridor. Available information on the ERTC has been deemed obsolete, requiring further study on the area (Patman, 2014). At the time of this study, a Louise Bridge alignment feasibility study is about to be tendered to private firms.

While the area as a whole has been neglected for decades, with abandoned buildings and few residential developments (City of Winnipeg Planning, Property & Development, 2008, p.42), recently developments on Waterfront Crescent have continued into the southwest corner of SPD.

The City initiated the development of a secondary plan to examine the area from a planning and development perspective. They also drafted pre-consultation and building inventory reports. While the recommendations from both documents highlighted the need for a secondary plan, and the civic committees recommended that the south area be identified as a priority for inclusion in the 2008- 2009 Secondary Plan Work Program, the plan has since stalled, with no progress occurring since the plan was put on hold (Council Minutes, 2015), possibly due the relocation of Winnipeg's new football arena to the south end (Lett, 2009). While a specific area plan has stalled, larger city documents, like *OurWinnipeg*, have identified SPD as an area of major redevelopment (Winnipeg, 2011, p.29). This directs the City of Winnipeg to consider growth and change options (ibid, p.31).

3.0 Literature Review

3.1 Introduction

The following review explored current literature on the many topics that compose my project. The purpose for this literature review was to examine the link between the various sub-topics within this research project. This section helped to provide a foundation for my research overall, which influenced the direction of my project. This review examined the following topics:

Firstly, *it examined the effects that transit infrastructure has on the built environment and land values.* By examining the history and relationship between transit infrastructure and the built environment as well as land values, one can see the impact TOD can have on an area by creating new communities and repurposing older ones. TOD can benefit all stakeholders by increasing property values, which can translate to higher selling prices for developers and residents and increased tax revenue for municipal governments.

Next, *it examined the potential link between BRT and development.* One gap in the literature I have found has been articles on BRT and its potential for TOD. Most articles tend to focus on the potential of light rail transit (LRT). While literature on BRT is growing, under the right circumstances, can be just as effective as LRT when it comes to spurring development.

My final area of review was *to understand what the most common barriers are to development and what people are doing to overcome these barriers.* This assisted me when determining the barriers Winnipeg faces and whether they are common barriers experienced by most municipalities, or a barrier that is unique to Winnipeg and will require additional research to overcome.

3.2 Effects of transit on urban form

Since the early 20th century, when urban mass transit became more prevalent, cities have been partly shaped and influenced by transit. (Cervero, et al., 2004; Dittmar & Ohland, 2006; Vos, et al., 2014) This can be clearly delineated into three periods: streetcar development, automobile prevalence, and 21st century transit renaissance.

In the late 19th century, developers would build streetcar lines to connect newly built communities to their jobs (Belzer & Autler, 2002). These new communities sought to separate residential neighbourhoods from industry with fast-moving streetcars. This new development allowed

neighbourhoods to be farther from the central business district, much like Ebenezer Howard's *Garden Cities* (Dunphy et al., 2004). "Streetcar Suburbs" contributed to the decentralization of city centres (Cervero et al., 1984), and allowed individuals to live in homes further away and commute regularly downtown in acceptable travel times. The construction of these streetcar lines made development more linear, sprouting from the Central Business District (CBD). Density was constructed around transit stations and resembled beads on a string.

During the 1930s, people and politicians in cities began adopting private automobiles as the primary form of transportation. Along with a change in the mindset of planning to facilitate the automobile, the construction of freeway systems changed how communities were planned. As farther distances from the CBD became more accessible, new opportunities to plan full communities on the fringes of cities became possible (DiMento & Ellis, 2013, P.27). Once these new communities grew, the nodes of activity created by the streetcar network were changed, as distances could be reached within minimal times (Belzer & Autler, 2012). The mindset behind this widespread adoption was that automobiles allowed for faster movement of people and goods, which would be economically efficient for businesses (ibid). At the same time, creating communities that were farther from industrial areas would provide a pleasant residential environment for families (DiMento & Ellis, 2013, P.3). Transit systems also evolved, with streetcars being dismantled and replaced with electric and diesel buses to more readily serve the new cityscape (Cervero et al., 2004; Dittmar & Ohland, 2004). This created a less prominent place for transit in everyday life. As automobile use increased, public transit became a less desirable mode of travelling (Belzer & Autler, 2002), with less interest among cities in developing transit (Dittmar & Ohland, 2004).

Within the past decade there has been a shift in lifestyle and living preferences. Higher car ownership costs, increasingly longer commutes, the price of fuel, and the increased price of single detached homes have caused a rethinking about where people live (Dittmar & Ohland, 2004; Loukaitou-Sideris, 2010, P.59). The change in demographics to smaller household sizes and increasing urbanization has shifted consumer preferences to areas where an individual can live, work, and play within the same area. As such, an interest in mixed-use development facilitated by multiple travel options has become increasingly popular (Belzer & Autler, 2002; Bertolini et al., 2009).

Today, transit is re-emerging as a major influence on urban form, creating new communities (Stokenberga, 2014; Currie, 2006), as well as

reshaping and revitalizing inner city neighbourhoods (Cervero, et al., 2004; Bernick, 1996; Loukaitou-Sideris, 2010, p.60).

3.3 Effects of transit on residential and commercial land value

While there is little evidence to suggest transit can solely create desirability, it is assumed that development around transit can be a desirable commodity if it offers increased accessibility to jobs and other amenities (Hess & Almeida, 2006). This desirability means properties near transit stations are able to command a price premium (Cervero et al., 2004; Mathur, 2014). Measuring the valuation of property values along transit lines is beginning to be well-documented. While these studies are not without limitations, and often fail to incorporate the larger regional and national economic factors (Cervero and Kang, 2011), the correlation is well-established, and in some cases, can even be predicted by the distance of a property from the transit station (Duncan, 2011). One study determined that property values near Buffalo's LRT increase $2.31 by every foot as it approached the station (Hess & Almeida, 2007). Studying different cities around the world found similar correlations to transit stations and land value (Cervero and Kang, 2011; Pagliara & Papa, 2011; Rodriguez & Targa, 2004). However, while premiums were found around transit stations, results remain inconsistent, as neighbourhood context and existing factors still remain a large component. Condominiums in San Diego, for example, realized a 6% premium in average quality neighbourhoods, compared to a 15% premium in high quality neighbourhoods (Cervero et al., 2004; Duncan, 2011).

Additionally, transit systems can continue to increase property values through network expansion. This increase is due to the increased scope of the system and addition of more destinations, making the system more effective for inner-urban travel (Cervero et al., 2004). Knight and Trygg (1977) found Cleveland's first transit line did not incur much development until the Airport extension was opened, which created significant development interest. Rodriguez & Mojica (2009) were the first to examine and quantify the price change of housing and properties already served by transit, and measure the difference in those values before and after a transit expansion on Bogota's Transmilenio. They found that asking prices rose 13%-14% after the expansion, with a minor increase prior to construction in anticipation.

Increased property value around transit stations can be a boon for municipal governments. Currently, most municipal governments (including the City of Winnipeg) receive the majority of their revenue through property taxes, which is calculated on the assessed value of the property through various means. This can potentially create a situation where governments

can fund transportation infrastructure or other projects by capturing this value, a term known as Property Value Capture (Mathur, 2014).

3.4 Transit-Oriented Development

One type of development to occur around transit infrastructure are projects known as Transit-Oriented Development or TOD. TOD is a type of development adjacent to transit stations and with the goal of promoting a minimum level of density and mixed-uses such as residential, retail, and recreation (Dittmar & Ohland, 2004). TOD has been gaining traction in North America for several years as a form of development that can reduce urban sprawl and reliance on the automobile (Cervero, 1998; Dittmar & Ohland, 2003; Vos et al, 2014). While this definition resembles that of the streetcar suburbs of the early 20th century, this recent form of TOD is heavily influenced by the principles of new urbanism and focuses on creating development that is pedestrian friendly, mixed use, and higher density (Dittmar & Ohland, 2004). Currently, there is no universally accepted definition of TOD, and many cities have adopted a variation of the previously mentioned principles. Because of this, TOD can take on many forms depending on the culture and growth patterns of a municipality. These variations span from development in existing urban centres to newer suburban development, levels of density, and frequency. The City of Winnipeg has adopted the following definition of TOD:

> *Moderate to higher density compact mixed-use development, located within an easy five to ten minute (approximately 400m to 800m) walk of a major transit stop. TOD involves high quality urban development with a mix of residential, employment and shopping opportunities, designed in a pedestrian oriented manner without excluding the automobile. TOD can be new construction or redevelopment of one or more buildings whose design and operation facilitate the use of convenient and sustainable modes of transportation, including public transit and active transportation (Winnipeg.ca, 2015).*

TOD projects aim to have an element of walkability and connectedness to it. Without these, there is a risk of creating transit-adjacent development (TAD) whereby a transit station functions independently and has no effect on the surrounding development, which leads to no improvements in public transit ridership, or decrease in automotive use (Renne, 2009; Vos, et al., 2014).

3.5 TOD potential for Bus Rapid Transit

Buses have been used as a form of transit for decades and have been primarily used for serving lower density areas. Its incarnation as a form of rapid transit only came to popularity in the late 1970s when Curitiba, Brazil

became the first city to incorporate Bust Rapid Transit (BRT) as a form of rapid mass transit (Deng & Nelson, 2010). Since then, the number of BRT lines has grown exponentially (Cervero & Dai, 2014). Proponents of BRT praise its speed and reliability to that of rail transit with operating flexibility to reach past the fixed route. BRT also has a lower capital cost to construct (Christopher, 2006; Currie, 2006), costing 4 to 20 times less than Light Rail Transit (LRT) (Cervero & Dai, 2014, P.128). While BRT is described as a spectrum of features, a full BRT system often has a dedicated transit way, high-capacity buses, frequent service, and fewer stations to focus on rapid transportation (Deng & Nelson, 2010).

One of the major challenges of BRT is that it is still viewed as a socially inferior form of transit, second to LRT (Currie, 2006). With inter-urban competition becoming a bigger factor in municipal decisions to attract high quality human talent, cities need to find bigger ways to look attractive (Harvey, 1989). Rapid transit is one type of asset used to attract people; this has led to a debate whether BRT can be as "cool and hip" compared to LRT (McLellan & Collins, 2014; Pendall, et al., 2012, P.164). BRT and its effects on development is also still fairly new, with not enough empirical data for proper comparison to LRT (Stokenberga, 2014); however, existing articles already show positive impacts on property and value (Cervero & Kang, 2010; Rodriguez & Targa, 2004; Rodriguez & Mojica, 2009). These findings will ultimately increase as more cities adopt BRT as a mode of transportation development (Cervero & Dai, 2014).

As BRT can have many different features, its effectiveness on development can vary wildly. For BRT to compete with LRT as an effective tool for development, the fixed transit way component is seen as essential, as developers view that as assurance and an incentive to develop around the station (Cervero & Dai, 2014; Cervero & Kang, 2010 Currie, 2006; Stokenberga, 2014). It has been shown that when BRT can mimic LRT in speed, efficiency, and reliability, it can overcome the negative stigma and be just as effective as rail and enjoy the same benefits, including a positive effect on development (Dunphy et al., 2004). Cervero & Dai also made connection with BRT and Knight and Trygg's factors for successful development, showing that when an area is supported for development, the transit technology isn't the most important factor (2014, P.136; 1977, P. 240). Likewise, when a BRT system fails to accommodate pedestrians around stations, development can have a negative effect. The Transmilenio in Bogota is seen as the gold standard for BRT. It is a cost effective "people mover," proven to reduce congestion and increase ridership (Deng & Nelson, 2010). However, while the City has grown, density has been occurring more rapidly outside the station areas (Cervero & Dai, 2014), highlighting the

importance in station planning regardless of vehicle (Cervero & Landis, 1996)

3.6 Development challenges to TOD

In North America, TOD has been described as a tool to create new and exciting communities and inject vitality into declining socially challenged neighbourhoods; however, in reality there exist a number of challenges and barriers to even moderate development.

Knight & Trygg were one of the first to examine land use impacts on rapid transit systems (1977, p.231). They concluded through a review of projects that several factors were needed for successful development:

1. Local government policies encouraging and supportive of development;
2. Regional development trends and overall good economic health;
3. Availability of developable land;
4. Positive physical characteristics of the area.

Without these conditions, an area will not develop effectively, and has been shown to actually lose density while increasing land values, pushing users further from the station area (Cervero & Dai, 2014, Hess & Almeida, 2007). Knight and Trygg's conditions may not come to fruition for several reasons, and have been identified in this review as well as categorized into the following barriers: *Fiscal factors* that affect the financial feasibility of a project; *Political factors* that affect stakeholders; *Structural factors* involved with physical development; and *Organizational factors* involved with regulation and bureaucracy.

3.6.1 Developer Cost/Risk Factors

Questionable market viability was cited as a barrier by developers who were in favour of more predictable single detached housing as opposed to perceived riskier multi-unit housing (Cervero, et al., 1994; Christopher, 2006). This led to reluctance from builders, who needed more certainty when building TOD. This perception grew the farther from downtown the line went (suburbs and exurbs) (ibid).

A lack of financing opportunities was also a barrier. Due to the lack of certainty from financial institutions, lenders were less likely to offer conventional financing (loans and mortgages). Even when financing was available, financial institutions could demand design changes, reducing the attractiveness and effectiveness of the project (Cervero, et al., 1994). Often government backing was required for assurance of financing (Cervero, et al., 2004).

Contrary to conventional thought, building density costs more per square foot than less dense housing after a certain point. This is due to increased design, risk, and material used, such as steel and concrete as opposed to wood (Altus Group, 2015; Cervero, et al., 1994). Parking structures also cost thousands more than a regular parking lot; on average, structured parking costs $8,000–$10,000 more a stall, which will ultimately be added to the unit selling cost (Cervero et al., 2004). In addition, parking also consumes land which can add to land costs, again passed on the selling price.

Lack of local and contextual examples is also cited as a barrier. TODs can be complex, with varying definitions and goals; finding easily comparable projects were also cited as a barrier (Dittmar & Ohland, 2004; Cervero, et al., 2004; Hess & Lombardi, 2004). This translates to a lack of local experience for building TOD on many levels, from local governments designing appropriate regulations and area plans (Belzer & Autler, 2002; Cervero & Dai, 2014), to private sector stakeholders that don't want to take the risk (Bertolini et al., 2009; Dittmar & Ohland, 2004).

3.6.2 Political Factors

TOD projects always involve numerous stakeholders, from municipal, state, and federal governments to transit agencies, private developers, landowners and community members. These stakeholders often have varying agendas and goals that compete with other stakeholders. As such, no single stakeholder can completely set the agenda. Disagreements can arise even within municipal governments: transit agencies attempt to get higher ridership, and planning departments attempt to build communities around stations (Belzer & Autler, 2002; Christopher, 2006, P. 28). If there is large disagreement, the project can often stall or fall apart, with governments stopping any incentives or private developers walking away (Cervero, 1994). Issues such as cost sharing and joint development terms are often areas that can set projects back, costing years and thousands of dollars in redesigns (Cervero, et al., 1998; Cervero, et al., 2004; Carlton & Fleissig, 2014).

A fear of development known as "not in my backyard", or NIMBYism, is a sentiment often held by residents of an affected community. The fear of lower property values, blocked sunlight, added traffic, lack of parking, and other factors that would disturb the existing landscape can create staunch community opposition to anything that does not resemble the norm (Cervero et al., 2004; Kahn, 2007). This opposition can range from appeals to permits and variances to stall and delay the project to involving local politicians to end the project (ibid).

3.6.3 Route Factors

In order to minimize capital costs of a transit line, planners often run the line on the path that is easiest to acquire. This includes areas of minimal community opposition, fewer property owners to deal with and cheaper land to purchase. This has resulted in station areas that would be in less desirable areas, like industrial sites, which can be far from amenities (Loukaitou-Sideris, 2000) or have existing issues, making it unattractive and expensive for developers to build (Bertolini et al., 2009; Cervero; 1984; Rayle, 2014). The Los Angeles Blue Line (an LRT line) is an example of failure for developing in non-ideal conditions. While it boasts high ridership numbers, development around stations in the inner-city were minimal to non-existent, due to several of the above factors (Loukaitou-Sideris & Banerjee, 2000).

Most TOD projects have been developed in suburban greenfield sites, where conditions were more positive for development, such as the availability of large land parcels, and a greater chance to shape positive characteristics around stations (Pendall, et al., 2012; Cervero et al., 2004). If a development is going to occur in a denser neighbourhood, smaller lot sizes and several landowners become an issue. As governments are the only entity able to acquire land through expropriation, developers often have to negotiate with these landowners, which can add to the project cost if some owners are holding out for a larger offer (Cervero et al., 2004).

3.6.4 Organization Factors

Inappropriate regulations and zoning requirements can add tens of thousands of dollars per unit in a development. The most cited case was parking construction, which on average can cost between $15,000 and $23,000 a stall. Parking requirements that add extra hundreds of thousands of dollars to an already expensive development, may derail it, especially when one of the benefits of TOD is less reliance on an automobile (Cervero et al., 2004).

In addition, with more simplified zoning (single use commercial, manufacturing, and residential) governments can prevent the necessary mixed uses to create a community of retail, residential, and offices next to each other, if not in the same building (Kahn 2007; Cervero et al., 2004).

3.7 Approaches to overcoming development barriers

While there are many barriers to the successful completion of a TOD, there are an equal amount of solutions and approaches to overcome these barriers. Strong incentives from local government and commitment for the long-term can create policies that encourage and support development, such as rezoning to allow for denser development. It is also important that

regional coordination and planning ensures a transportation network is not just a connection between centres, but a tool for urban development (Tan, et al., 2013; Loukaitou-Sideris, 2010; Pendall et al., 2012). These incentives can come in many forms, but for the purposes of this review they have been grouped into three categories: *Financial, Regulatory, and Political.* The right amount of coordination and strategy can act as a major stimulus to development.

3.7.1 Financial Incentives

The most straightforward incentives governments can provide are monetary. TOD is often placed in conditions that are more complex, with higher costs compared to traditional housing developments. Supplementing this gap and reducing the competitive difference between both alternatives can even the playing field and make developers more interested in TOD. These incentives can come in the form of reduced development and fees/taxes (Cervero et al., 2004; Belzer & Autler, 2002). Abating or forgoing tax revenue is another tool governments have to encourage development. Through tax increment financing, a municipality can divert additional property taxes caused by the development to flow back into the area to improve existing infrastructure, or they can collect less taxes for a period of time (Mathur, 2004; Bertolini et al., 2009). Subsidizing the costs of converting the land to buildable conditions can also assist developers, such as remediation costs of post-industrial sites. Assembling land prior to development, so developers have just one seller, will also simplify the process (Cervero, et al., 2004; Kahn, 2007; Tan, et al., 2013).

3.7.2 Regulatory Changes

It can be difficult to plan for a development when there is a lack of examples and working models. By creating a detailed vision with goals and objectives prior to development, this can allow developers the stability of knowing what a municipality expects from their development in terms of design and requirements (Cervero et al., 2004, P. 102; Christopher, 2006, P. 29). It can also lay the process out for municipalities to examine whether the current set of bylaws is the best format, or whether modification needs to occur, such as the creation of a new "TOD bylaw" to create a regulatory environment that simplifies the complexities of compact mixed use transit development (Belzer & Autler, 2002; Bertolini et al., 2009). One of the more cited regulation changes is redefining parking requirements in a TOD, as transit can supplement travel demands. Reducing or even capping the amount of parking can save millions of dollars on a development and possibly reallocate space to more appropriate revenue generating features. (Bertolini et al., 2009; Belzer & Autler, 2002; Cervero et al., 2004; Dittmar & Ohland, 2004).

3.7.3 Political Effects

As TOD can often be mired in complex zoning and regulation, having a political ally and champion who believes in the project is extremely important, and can be a windfall for developers (Bertolini et al., 2009). These political figures can advocate, take the lead and coordinate between other levels to ensure priorities are explained and followed throughout the whole process (Bernick, 1996; Pendall, et al., 2012; Tan, et al., 2013).

Equally important is getting resident approval within the affected community, by encouraging strong community involvement where residents can voice their concerns and leverage their wants to politicians and planners (Loukaitou-Sideris, 2000; Kahn, 2007). Fears and concerns can be addressed, while residents might have the opportunity to change the design to one more in line with the community character. Also, someone might break into a song about a monorail.

Overcoming barriers in socially and economically challenged neighbourhoods may require additional resources to attract development because of the added negative stigma and financial gaps. But the payoff can be large, too: rapid transit development can act as a medium for revitalization in these communities and open up new markets to developers that they may have overlooked (Cervero, et al., 2004; Pendall et al., 2012).

3.8 Summary

This review presents current literature and knowledge on bus-rapid-TOD, including its effects on urban form and land value. It examines the barriers to a successful project as well as approaches and solutions to overcome those barriers.

From streetcars to freeways, transportation infrastructure is shown to have an effect on the modern city (Dittmar & Ohland, 2004). Recently there has been a shift towards encouraging denser transit nodes for easier access to amenities and job markets. This has created a desirability, which, in most cases, equates to higher price premiums. These benefits provide higher selling prices to developers and more tax revenue for government (Mathur, 2015).

Newer to North America, TOD is a form of development influenced by transit and promotes compact and mixed-use design (Dittmar & Ohland, 2004; Cervero, 1998). While the majority of literature revolves around the development potential for LRT, articles on the effects of TOD with BRT are rising, and — fortunately—have found that the gap of TOD potential between BRT and LRT is closing. This means BRT is becoming a viable alternative to

mass transit and can be used as a tool for urban redevelopment (Cervero and Dai, 2014).

While a large component of the success of a TOD depends largely on regional economics (Knight & Trygg, 1977), there are several local challenges that stand in the way of successful TOD, including: fiscal issues, such as lack of financing opportunities; political issues, like community opposition; organization issues, such as inappropriate design regulations; and finally, structural issues, like unfavorable land and building conditions (Belzer & Autler, 2002; Cervero et al., 2004). However, having political allies and a receptive government can ensure that a clear vision and process are created to facilitate development, while financial incentives can reduce the higher costs of building on undesirable land to even the desirability to build as compared to building in greenfield sites (Bertolini et al., 2009).

4.0 Research Methods & Data Analysis

This practicum integrated the following qualitative research methods to answer my proposed research questions. Figure 4.1 provides a brief summary of which research method assisted in answering my questions.

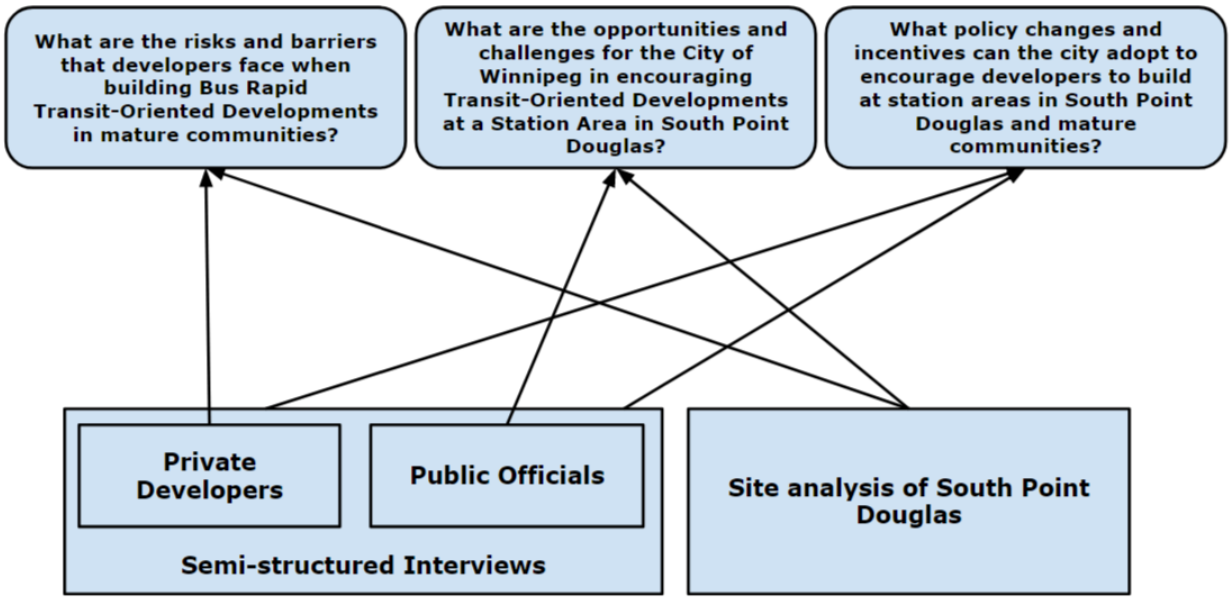

Figure 4.1. Chart showing which method assisted in answering which question

4.1 Semi-Structured Interviews

To better understand the barriers that developers face when trying to develop TOD in mature communities, I conducted interviews with private developers as well as public officials. As Zeisel states, interviews involve asking questions to systematically "find out what people think, feel, do, know, believe and expect" (1981, p. 137). These feelings and attitudes are important because they provided first-hand context to the local barriers, particularly when dealing with municipal government.

4.1.1. Development and real estate professionals

The first group of interviewees were private developers. These interviews addressed the question about what barriers developers face and provided information on potentially overcoming those barriers. I reached out to developers who were either:

- Currently involved with projects on the first leg of the SWRTC or in the planning stages of the second leg
- Focused on infill development, as they would deal with similar barriers and constraints to developing in mature communities.

- Involved with greenfield or suburban residential development, to understand their views on the perceived and actual barriers these developers face in regards to developing in a mature community.

Six developers were asked to participate, of which all six were interviewed.

4.1.2 Public sector officials

The second group interviewed were public officials with the City of Winnipeg. This group assisted in answering what types of challenges and benefits exist on a municipal level for implementing TOD in a mature community. This group also provided context on the willingness of the City to use its powers (zoning, subsidies) to assist in the development process. I interviewed present and past officials from the City of Winnipeg who had knowledge on Winnipeg's BRT system, planning in mature communities, and had experience dealing with developers who develop in mature communities.

12 developers were asked to participate, however, three declined. In addition, one interview was not able to be coded as most of the information was lost due to a technical issue.

4.1.3 Format

I conducted semi-structured interviews because of their flexibility to ask different questions or ask them in a different order depending on the situation. They also allow for unanticipated responses (Grey, 2009; Zeisel, 1981). Questions were grouped and ordered by themes based on issues and barriers identified by the current literature, but allow for diversion should the conversation go on to tangents. A copy of interview guide can be found in Appendix A.

4.1.4 Data Analysis

All interviews were recorded and transcribed, which helped with coding and analysis. Notes were also taken during all interviews.

I aimed to follow the coding process written by Neuman (2014, P.510). The first step was open coding with a first pass through reading of the transcripts to label and identify themes. As I examined development barriers and how to overcome them, I planned to initially organize this information by the strengths and weaknesses of building TOD in Winnipeg, as well as the opportunities and risks (both perceived and actual) to future development. For classification, I noted keywords to more detailed themes. This list served three purposes (Neuman, 2014, P.512):

1. Helped me see the emerging themes at a glance.
2. Stimulated me to find themes in open coding.

3. Used the list to build a universe of all themes in my study, which I could manipulate for further analysis

The second step, axial coding, was a second read through the information. I used the themes I found earlier to start reorganizing the data and look for plausible causes, consequences, interactions, strategies, and processes. Selective coding was the third and last step. This built on the themes and concepts I found and built in the last readings. To illustrate those themes and contrasts I pulled out examples and cases to highlight and make comparisons.

4.2 Site Analysis using GIS of the Point Douglas Area

A site analysis was conducted to provide a contextual examination of the history of land ownership, transactions and property values, current condition of the built form, and land use of the Point Douglas Area. As this practicum attempted to identify barriers and solutions to developing TOD in a mature community, capturing detailed information regarding this area helped to determine the site-specific barriers developers encountered, as well as what opportunities could be implemented to encourage further development.

A site analysis can look at an area through many lenses. For the purposes of this report this analysis examined the area through a cultural lens, which helps define a "sense of place" within the area. These factors include historical, legal, aesthetic, and other socially significant attributes (LaGro, 2008, P.139). LaGro also provided an initial list of features (ibid, P.140), but with the literature and through the interviews it expanded to cover the areas below.

4.2.1 Parcel Information

This was cited as a major barrier to development as it can add a layer of complexity trying to deal with multiple owners (Kahn, 2007). This can be exacerbated when lots are small or housing prices are high, creating difficult buying conditions for larger development. Information looked at included: parcel sizes, land use, and number of units.

4.2.2 Zoning Bylaws

A common form of land regulation, zoning dictates what can be built in which area (LaGro, 2008). As many authors have identified the need for TOD to be mixed use, identifying whether the area needs to change zoning was important for the potential of commercial and retail components of future developments. In addition, as SPD is in the middle of two distinct zoning bylaws, it was important to examine how these districts helped or hindered

consistency and what the major differences were between the two and the future of the area.

4.2.3 Environmental Quality

The issue of brownfield sites was mentioned frequently as a barrier in the literature review. As SPD is still an active industrial site, it is suspected that soil contamination will be prevalent, creating issues for development. Studies from the City help identified if any survey has been done of the area.

4.2.4 Area demographics

A profile of the community helped focus on the contextual circumstances for the existing community. Knowing this information helped to understand potential effects of introducing new development into the area. Furthermore, this helped to identify how potential changes will impact different groups of people, and their potential response to the changes.

4.2.5 Social infrastructure

For TOD to be effective, it has to act as a community with community amenities. Determining where libraries, community centres, parks, schools, and hospitals are can show how well served the community is (Carlton & Fleissig, 2014).

5.0 Findings

The literature review in section 3 showed the larger general challenges that BRT and TOD face in North America. It also showed several ways to overcome those barriers. The following section is meant to localize those challenges and barriers more specifically to the City of Winnipeg.

5.1 Semi-Structured Interviews

The interview research asked key players in Winnipeg's development community, including private developers and relevant public officials to reflect on their perceptions of the challenges of building TOD in Winnipeg and, ultimately, how to overcome those barriers. Questions to key informants were based on themes found in the literature review in Section 3 on the broader topics of the potential for BRT and the challenges to TOD, particularly in mature communities. All participants were asked the same questions, although they were allowed to deviate to other topics if needed.

5.1.1 Private Developers

The first group of key informants interviewed were private developers. They answered questions specifically about the challenges they face when developing residential/commercial projects and provided information on potentially overcoming those barriers. The following developers were chosen:

- Two developers that were involved with projects on the first leg of the SWRTC, and in the planning stages of the second leg;
- Three focused on infill development, as they deal with similar barriers and constraints to developing in mature communities;
- One developer with a specialization in greenfield/suburban residential development. This was done to better understand their views on the perceived/actual barriers to developing in a mature community.

While each developer has different experiences based on their individual projects, which were located throughout the City, some common themes did emerge. The themes they identified were higher costs associated with developing infill projects; a contrast between administration and councillors regarding approvals; inconsistencies in the City's vision for TOD; and ineffectiveness of subsidies in overcoming these barriers.

Existing challenges to building infill developments in mature communities

As SPD is an established mature community, all future development in the community will essentially be infill. The first series of questions I asked developers were geared towards the feasibility of developments in infill sites versus greenfield sites. All but one developer found greenfield to be easier

and more profitable to develop. The various challenges and barriers for private developers associated with mature communities are presented below.

Interviewees identified the cost of land as the largest factor between the two types of development. All the developers (6 total) noted higher land costs when developing in mature communities. Greenfield sites are generally on the fringe of the City, with no amenities, major infrastructure, or existing development, making them generally less expensive than land with existing structures on it.

In addition, issues regarding complexities to land title and ownership were identified by four developers. Generally, neighbourhoods in mature communities are comprised of several landowners. For some infill sites, developers would deal with multiple owners in order to obtain a parcel of land large enough to develop. This led to added costs in some cases, as multiple owners would speculate or resist selling their land, hoping for a higher return.

The next factor, cited by four different developers, was higher servicing costs; in particular, the cost of upgrading underground infrastructure (water and sewer lines). Originally built for less dense neighbourhoods, these lines need to be widened to accommodate new development demands associated with infill projects. Comparatively, greenfield developments are more accessible to these utilities, and can be installed at a size that will accommodate the new site. In addition, the burden of cost can be placed disproportionately on the developer who implements the upgrade. One private developer stressed the challenges associated with developing in established communities, stating:

> *I've heard horror stories from developers, who haven't been able to get the density that they want because they simply don't have the sewer and water capacity available in that neighbourhood. You really can't upgrade. It is what it is at some level.* (Private Developer 6)

Given the risks associated with utilities alone, it is clear that private developers see these challenges as significant risks to their bottom line, potentially pushing them away from taking these challenges on altogether.

Another large factor noted by all developers were parking considerations. While downtown Winnipeg does not require a parking minimum, the surrounding neighbourhoods require a minimum of 1.5 parking stall per unit, unless the developer applies for a parking reduction (Winnipeg bylaw, 2016). With these minimums, developers found their

project size and density were more dependent on how much parking could fit onto a site. Private Developer 4 stressed the significance of parking, pointing out:

> *Parking is always one of the largest constraints to development. Often, it's not zoning that's the constraint, it's not the size of the site, it is parking. How many stalls can we get here? How many underground parking stalls? We work back from the parking available to determine the density.* (Private Developer 4)

While TOD places a large focus on the importance of walkability and the utilization of public transportation, it is still the perception of the developer that the automobile still plays a significant role in the mindset of consumers, which in turn impacts the choices developers make when developing TOD projects. Developers who managed to get parking reductions for their projects found community opposition was a large challenge. Members of the community often complained their neighbourhood was already congested, and argued a new development will only add to the existing issues of no street parking availability.

> *They [existing residents] wanted all possible parking for visitors and residents. Everybody you can think of had to park on this lot because already Osborne Village was too full of people and they just don't want any more people or any more cars and it's dangerous.* (Private Developer 1)

Adding to last point, broader community opposition to development was identified by all but one developer was identified as a major challenge. Unlike greenfield developments, which generally had no existing community, mature communities have housed generations of people, with their own perception of what should and should not be in their community. One developer noted that one of their sites have been informally used for years as a dog park by residents from the existing area. While the developer is the legal land owner of the site, the community had identified it as public space causing anger over the development. Private Developer 5 noted the difficulty of ownership and perception of a space by those in a community:

> *"When you do get an existing piece of land that's maybe overgrown, and people make the assumption that maybe it's a park space, then they're going to have that "taken away" from them. Meanwhile, it's been private land, and there should have been a fence up around it. Maybe those people should not have had access."* (Private Developer 5)

Community perception proved to be a resounding challenge to private developers, as open space can often lead to misperceptions and varying expectations by those who are already in the community. Private developers then have an added task of working with residents and building support to move forward with their projects.

The last major challenge cited for infill development is developers found their interaction with the public administration was generally more complicated and took more time to process compared to a greenfield development. This was a result of additional design requirements for the site, extra zoning accommodations or changes, and addressing upgrade costs for the existing infrastructure. Developers who have done larger greenfield developments said that because they were usually going for single use, low density development, issues like parking requirements and zoning changes were minimal and could fit in the overall plans because of the size.

Elected officials have large influence in development

All developers agreed councillors had a large influence in deciding the fate of a project through the initial council's community committee meetings, where they could easily stop the progress of a project. It was noted by three developers that while there are three ward councillors that have a vote, the area councillor often indirectly influences the decision of other councillors, and voting in opposition is rare. After the Neighbourhood Community Committee, it would pass through the Standing Policy Committee on Property and Development, The Executive Policy Committee, and finally Council, all allowing elected officials to vote on the decision to allow or deny (Figure 5.1). This agreeance with the area councillor was attributed to Winnipeg's ward system, where issues are a much more local issue than what might be in the best option for the City, and judgement is often reserved for the local councillor. Compared to the issues that may be brought up by the administration, elected officials were more likely to base their decisions on more personal issues like concerns raised by their constituents.

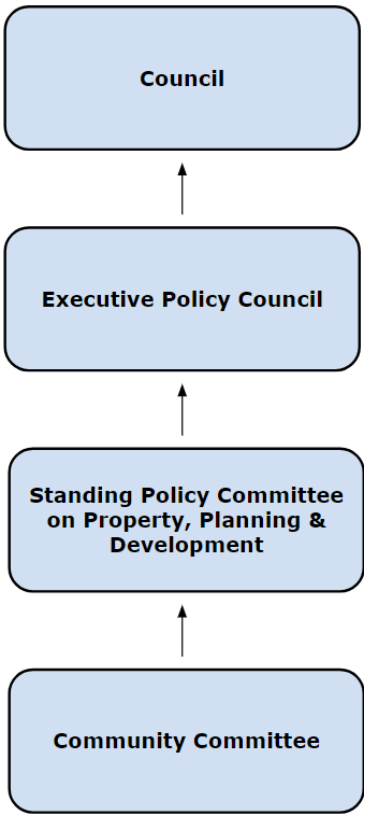

Figure 5.1, development approval flow

While it was agreed councillors have the power to easily oppose projects, it was stated by three developers that councillor support is not an instant approval, but only another step completed in the development process. This creates a higher risk of uncertainty for developers, as decisions to stop projects face a different element of standards (personality or public persuasion). "...I would say it's more you need their [Councillor's] support, but they don't really drive projects to happen more quickly. If you don't have their support, you don't get the approval" (Private Developer 6).

Inconsistency in City Vision

While not directly asked, four developers noted that the public administration, in particular the planning department, is generally a positive force in guiding a development through the process. One developer remarked how planning staff was excited to work with developers on new or challenging types of development (Private Developer 5).

However, regarding the City's vision for the future of Winnipeg set out in *OurWinnipeg*, developers were split on this issue. Some agreed that given the limitations of the planning department to implement the plan within the administration, they do attempt their best to follow the guidelines set out in

OurWinnipeg. However, there were concerns from two developers that Public Works Department can override decisions for more efficient traffic flow.

For developer agreements, a lot of the initial stakeholder time with the City happens during the development agreement phase, where planners negotiate with the developer for who will pay for what infrastructure and operating costs. These costs range from sewers to additional parking to additional parklands. Four of the smaller developers agreed there was not much consistency between the sites they developed. It was noted the location of the site and the type of development influenced more what the City would require, as opposed to a standard list. The two larger developers were split on this question, with one generally understanding what requirements will be asked with little uncertainty, and the other saying there are still lots of uncertainties when proposing a development.

When asked about its applicability to the potential of TOD development, these inconsistencies were highlighted further. While there were provisions to create a complete community around transit stations, there was also ambiguity around broader interpretations. This ambiguity resulted in demands that were more typical of the usual development of separate uses instead of mixed, large green spaces for parks instead of plazas and a focus on automobiles with required parking.

Subsidies minimized risk in newer development opportunities, but delivery is just as important

As expected, all developers agreed subsidies were great assets in directing their focus and great incentives to develop "riskier" types of development. When asked about developing affordable units, three developers cited the cost of land as a large factor controlling unit prices. With the higher cost for land and unit construction in infill, subsidies translated into a way to offset higher selling point to achieve affordable units.

Subsidies were also influential for development in one of the City's major redevelopment sites. Two developers involved with the redevelopment of Waterfront Drive and the adjacent East Exchange identified the infrastructure put in by the City (a new road and park), as well as grants for affordable housing, as crucial to considering any involvement in those projects. It should be noted that this was not cross referenced by their development pro formas. This area shares many characteristics with SPD, as they are adjacent to each other and hold similar attributes as former industrial sites. The area is currently in transition, with a dozen residential complexes completed and more slated for construction.

While these grants were stated as a major factor in deciding where to develop, the conditions and payout of the grant were less than favorable to developers. In some cases, a payout would take decades to be fully realized, affecting the value due to inflation. Any grant payouts would be worth half as much within 20 years given current rates of inflation. These conditions were noted by the two developers as less than ideal for continuing to use the future programs.

Inconsistency from City creates risk

The final comments that came from most developers was that lack of a cohesive vision from the City and politicians contributed to significant challenges to these developments. Furthermore, this uncertainty regarding whether the City was prepared to embrace TOD and infill compounded the risks associated with these projects, making it harder for private developers to invest in seemingly risky developments. Parking requirements often seemed counter-intuitive to the future demand of sites, and lack of consistency from major political figures failed to convince would-be investors in driving potential investment into a project. Developers felt TOD will ultimately be treated like existing types of development, without giving consideration to its unique characteristics. They felt that certainty and support is needed to overcome issues like community opposition to large projects, or addressing the large costs of infrastructure upgrades in Winnipeg's mature communities.

5.1.2 Public Officials

The second group interviewed were public officials within the City of Winnipeg. This group assisted in answering what types of challenges and benefits exist on a municipal level for implementing TOD in a mature community. The group of public officials comprised of:

- Three current planners within the department of Planning Property and Development;
- Two current staff with Winnipeg Transit;
- Two past employees of the City of Winnipeg;
- One current councillor.

While each public official has different expertise based on their experience and position within the City, it was important to understand the larger organizational values and how it affected their direct jobs. The themes they identified were: lack of consistency regarding priorities, lack of a group to take on responsibility and oversight, and little contextual research done on Fort Rouge Yards.

Varying visions, milestones, and priorities for TOD

When asked about the goals and milestones that apply or should apply to TOD, it was noted there was no consistent priority amongst public officials; instead, up to five different priorities emerged depending on who was asked. These priorities included development opportunities for new lands, revitalizing economically depressed areas, reducing traffic or auto ownership, accommodating growth through density by providing additional services to existing populations, and increasing affordability. However, as cited in the literature review, there is no universal definition of TOD, which includes what aspects should be prioritized. In addition, while not consistent for each public official, when combined, all these responses align with the definition in *OurWinnipeg* to different degrees.

Generally, most respondents thought the City has not been consistent when prioritizing issues of TOD, especially when compared across all departments. There is a feeling not everyone from other departments fully supports TOD, and views it more as a negative direction, or different to how they have done things in the past. Several staff mentioned the City's policy regarding TOD, but felt it stopped short and there has been no framework or articulation for developers to build in these areas.

Due to the varying responses from public officials, this inconsistency has also created several differing and irregular milestones for what would count as a success, including increased transit ridership, increased land value for properties near a station, increased density of units and land mixes, decrease in personal auto vehicle kilometres travelled (VKT), and growth occurring in strategic areas. These answers were also not consistent within each city department; planners prioritized different things compared to other planners, transit officials, and the councillor had different priorities from planners. While the City initially attempted to standardize and prioritize these issues with a cross-departmental team to retain some form of consistency, there were additional resources added to maintaining the group. Through years of transfers and retirements, the cross-departmental team ceased to exist, with functions returning to each department. Under-filled city departments were cited as a large reason for the lack of resources dedicated to TOD.

No formal roles within administration to progress TOD

The role of the City in addressing development barriers for TOD was evenly split between favourable and not favourable. Staff who thought the City should play a larger role in reducing barriers cited several ways, including being proactive in addressing infrastructure concerns, pre-zoning land for densification, or reducing the amount of required parking in an existing neighbourhood:

> *That's where, if you look at cities where they're making progress, is they've gone beyond just proactively rezoning the land or changing the policies. It's going, "What do we need to set the enabling conditions for private sector development to happen to improve the public right of way?" Is it streetscaping? Subsurface infrastructure? So on and so forth.* (Public Official 7)

Officials who were not in favour of actively assisting developers in overcoming barriers cited that the busway itself was a huge tool the City used to reduce barriers; specifically, create an environment that incentivizes development. Any additional incentives might be criticized as excessive, financially irresponsible, or unfair compared to other types of developments.

> *We risk some criticism in the sense that we spend hundreds of millions building rapid transit corridor, supposedly, as an incentive for TOD. That is the incentive, right? So, add further incentives on top of that and we can't make the argument for building transit [infrastructure]*. (Public Official 3).

When asked what role Winnipeg Transit should have in planning development around the station area, there was a mix of responses. City planners suggested transit have a secondary role to add their opinion to existing area and development plans. Meanwhile, Transit officials believe they should have a bigger role in the development around stations, as they can ensure pedestrian and transit links are integrated properly with development. In addition, responsibility of planning between the station and the areas surrounding the station was not clear with no mention on which group is accountable.

> *I think, obviously, they've [Winnipeg Transit] got their functional requirements for the station itself... Beyond the station itself, I think Planning does need to be more involved in the planning of the station areas. ... I think if Planning had a greater role in it and was given an opportunity to be more collaborative, I think you'd end up with better results*. (Public Official 1)

Finally, the largest issue— and a possible reason to explain the differing answers between City staff and all the previously mentioned aspects of TOD — is no one can confidently say who is in charge or responsible for coordinating, implementing, and maintaining it. Most public officials get involved in their part of the project, whether transit and dealing with transit issues, or the planning department reviewing development applications, however there was no identifiable person or group who worked

to coordinate between all the City departments on projects, while there is a process to ensure that every department looks at their requirements, it is on piecemeal basis.

Past experience and the SWRTC and Fort Rouge Yards

When asked about building knowledge capacity (training, creating processes, etc.) prior to the City's foray into TOD, all public officials said very little to no training was provided. Training was done through self-interest and webinars, depending on the level of interest of the public official. Some officials mentioned a TOD handbook was created for the City by consultants, although it was not viewed as overly contextual to the City; instead, the handbook offered more of a general typology of developments (comparing downtown, mature community, and greenfield areas). When asked about the specific challenges the City faced when preparing the Fort Rouge Yards for development, several major issues emerged, as outlined below.

Community opposition, particularly problems integrating a development that will eventually become a new community into an existing, stable neighbourhood, was one of the largest issues. These integration fears were also apparent in concerns regarding road access and building new housing units that are very different than the existing housing stock.

There were challenges around working with what a few public officials described as an "under-resourced" developer, which was exacerbated by the size of site. This resulted in capacity issues from the developers' end to move the project at a fast pace.

Parking requirements were seen as too high. This added extra work for planners and transit officials, who had to convince traffic engineers from Public Works that due to the nature of the transit improvements, more people would take trips via transit and require fewer parking spots. This also fell under community opposition, as the existing community feared the influx in residents would lead to less available street parking for themselves.

The final issue was servicing costs. With the adjacent neighbourhood having a combined sewer system, the never development required massive upgrades to the site. Fortunately, this was a challenge the City was able to overcome by proactively upgrading the utility during construction of the transitway. This allowed a lot of pre-work on the developer's side to be completed in exchange for a fee. Having done the pre-work on the utilities was cited as a major risk in attracting developers to the site.

Elected officials have a huge amount of power within the public service to help or hinder projects

Like the developers, public officials also said councillors had great power to halt or progress a project. However, public officials were more aware of a councillor's importance in the development process and the need to satisfy councillor local interests and needs when making project decisions. This was due to the organizational structure of the City, with councillors in decision-making positions where they have a lot of say on decisions that affect several departments and their staff. It was also mentioned by four public officials that because Winnipeg is a ward system, councillors are much more localized in their interest with projects. This allowed their decisions to be based on local factors like community opinion as opposed to more macro city issues, such as housing affordability and congestion.

> *...If a councillor gets behind it [development], then it moves that much more quickly. That becomes almost your priority. Your sole job is to make that thing happen or if that can happen with the councillor versus if there's a councillor doesn't want the project to go ahead, they can really crush it. It gets difficult to see ... It just doesn't happen. It mysteriously doesn't happen*. (Public Official 6)

Without success, the public may reject progressing on TOD

There was a fear TOD would not be properly explained to the public to get them on board, and the consequences from this would range from lack of interest to full opposition, which may affect a councillor's willingness to push the project forward. It was also noted by all interviewed that Winnipeg is still in a good position to help create a positive environment for TOD and there is demand for this type of product, but on a smaller scale (smaller infill sites that share many characteristics).

> *My concern is that because it's [TOD] something that the public doesn't necessarily all buy into and we have a very auto-oriented city, is that if it's not done right, it's going to lose more traction as we go along. So, I think what's really important, in terms of the success of TOD and rapid transit, is being able to prove successes that the public can buy into that will allow us to go to the next phases of development.* (Public Official 2)

5.1.3 Summary of Interview findings

Private Developers

Due to several reasons, ranging from lack of abundant land to parking requirements to dealing with an existing community, developers are saying there is a significant cost increase to building residential and commercial infill units in Winnipeg's mature communities. Due to these premiums,

developers agreed newer, unproven development types were perceived as riskier, and subsidies and supports have worked in the past when the City has tried to redevelop older industrial land.

Every developer noted that councillors are very important in the development process. However, their support was one-sided, with a critical councillor having much more power to stop a development than a supportive councillor having the power to push through a project. This was also noted by the public officials (to a greater degree) due to the working relationship between councillors and the administration.

While the planning department was described as supportive of the City's long-term vision, it was not consistent with other departments, particularly the Public Works Department, resulting in varying requests for each project. However, when arranging developer agreements, opinions ranged from the City being fairly consistent to largely uncertain.

Public Officials

The most noticeable theme in the City's approach to TOD was inconsistency. Public officials were not sure of the main priorities, milestones for measurements, or even the vision of what TOD should look like in the City. Most would reference back to the TOD handbook; however, this was only a generally typology of TOD developments and not specific to the City.

Compounding the lack of vision and priorities was an unclear focus on who is responsible for ensuring TODs success in Winnipeg. The existing process is compartmentalized, bringing in subject matter experts when needed, but lacking oversight on the entire process. It was unclear among public officials whether any additional resources were needed to help facilitate TOD, given the commitment to the infrastructure and the benefits associated with it.

5.2 Site Analysis

The site analysis section establishes the physical, historical and administrative context of SPD (SPD). A site inventory was conducted to gain a better understanding of the current situation regarding the urban context, current land uses, parcel sizes, connections and social infrastructure, and utilities. The information gathered provided a real example in which to apply recommendations from the earlier semi-structured interviews.

5.2.1 Relevant Historical Context

The peninsula of Point Douglas is located north of Downtown along the Red River, with Main Street bordering the neighbourhood to the west. Established in 1813 as Fort Douglas by the Selkirk Settlers, it is one of Winnipeg's oldest neighbourhoods. When Manitoba joined confederation and the fort was eventually dismantled, the area was home to Winnipeg's most prestigious residents (History of North Point Douglas, n.d.). In 1880, when the transcontinental railway passed through Winnipeg, it bisected Point Douglas, essentially creating two neighbourhoods. SPD became a hub of industry, and North Point Douglas remained primarily residential (PP&D, 2008). With this drastic transition, the wealthier residents left for other parts of the City, leaving a working-class neighbourhood behind (History of North Point Douglas, n.d.).

Over the decades, as the factories in SPD relocated, the neighbourhood transitioned again into a poorer area (ibid) with vacant land and a housing stock not updated since 1949. This transition attracted a larger proportion of Indigenous people, which also marked a significant attempt at transforming the area in 1974; the Neeginan plan was created by the Indian and Metis Friendship Centre to build an "Indigenous community campus" which would house educational, commerce, and residential services (Damas and Smith, 1974, p.11). This change helped transform one of the largest icons in the area, the Transcontinental Union Station (later changed to the Canadian Pacific station), along with several buildings to the east (Neighbourhood Inventory, 2008, p.8).

Throughout the '70s and '80s, Manitoba's economy was ranking consistently at the bottom compared to other provinces, and Winnipeg, being Manitoba's engine, was also stalled. With years of suburbanization, Winnipeg's inner city was showing signs of decline, both economically and socially (Stewart, 2007, p.70). SPD was no exception and would show this decline through stagnation of the area businesses. No major developments would occur.

In 1991, the Waterfront area in the East Exchange was being envisioned with a dramatic transformation to restore the waterfront and

highlight the existing cultural institutions. These changes would not formally happen until early 2000, with the construction of Waterfront Drive and the adjacent Stephen Juba Park. Four developments, adding 206 residential units into the area, were also created at that time. These changes have had a significant impact on the area, with hundreds of millions of dollars in investment and several hundred additional units built in addition to other commercial, office, and cultural services. (see figure 5.2) (IUS, 2013, p.3; Scatliff+Miller+Murray, 2001, p.2).

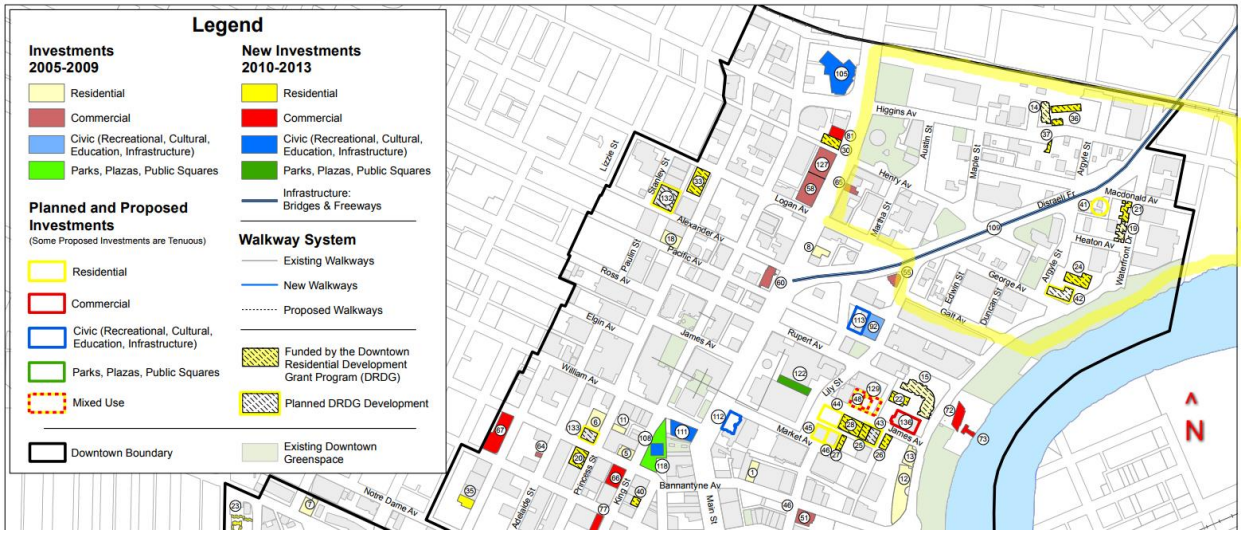

Figure 5.2, Downtown Winnipeg Development Map (IUS, 2013, p.3)

5.2.2 Relevant Policy Context

This project used the City of Winnipeg's boundary definition for SPD (Figure 5.3), which is defined as an area immediately Northeast of downtown with a portion included in downtown. The area's boundaries are Main Street to the west, the Canadian Pacific Railway to the north, the Red River to the east and a portion of the south, and Glat Avenue and Logan to the remaining portion of the south (NOW, 2016).

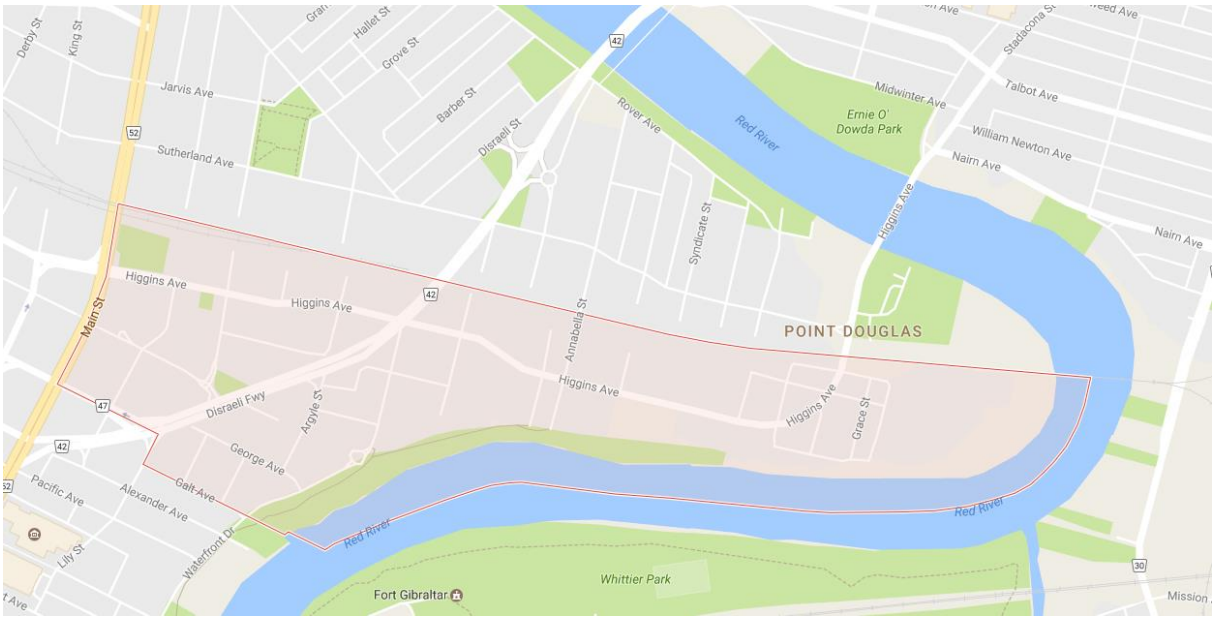

Figure 5.3 Google Map image of SPD (Google, 2017)

SPD is approximately 171 acres and comprises 219 parcels (Winnipeg Assessment and Taxation Department, 2016) with the average site size just under one acre. In addition, the largest property in the area is 38,243.39m^2 or 9.45 acres.

Portions of SPD intersect downtown and are influenced by two different zoning bylaws: The City's general bylaw, and the Downtown-specific bylaw. The majority of lots to the west of Waterfront Drive fall in the downtown area and are zoned as multiple-use, allowing for land uses from residential to light manufacturing and retail. The majority of lots to the east of Waterfront are zoned almost completely manufacturing, with three lots zoned as commercial. Under the current zoning bylaw for manufacturing, residential and commercial are not permitted and would require changes; this is highlighted in figure 5.4.

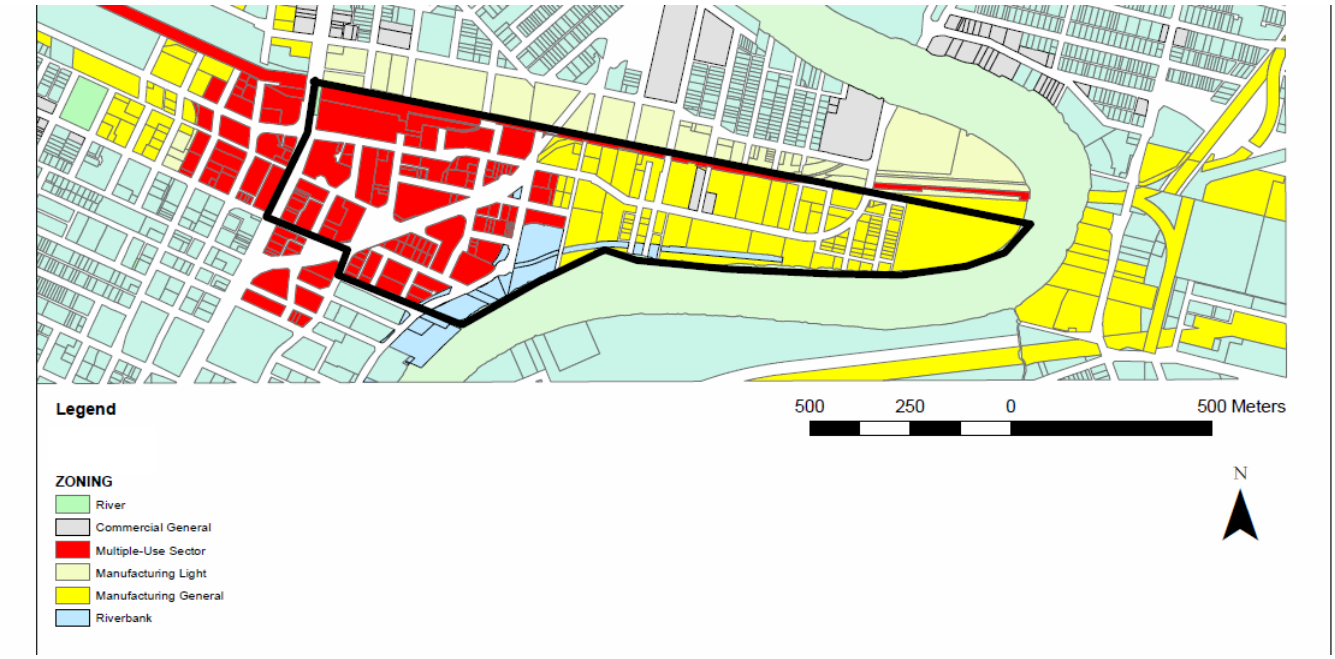

Figure 5.4 Zoning map of SPD (Neighbourhood Inventory, 2008)

The multiple-use zoning district is part of the Winnipeg downtown zoning bylaw. This zoning bylaw was in response to the complications of the previous bylaws in different parts of the downtown area, and aims to recognize the development potential in parts downtown Winnipeg such as the Exchange District (Welsh, 2004).

SPD is also designated as an area of major redevelopment by the City (Winnipeg - *Complete Communities*, 2011, P.64). These lands are described as follows: "Areas that once thrived under particular land uses in the past may not be needed for those purposes today. Some of these underused sites have significant strategic value, since they can capitalize on existing infrastructure through intensification" (ibid). As such, the City views investments in these areas as transformative and often requires additional infrastructure improvements. These improvements have the potential to bring in a lot of development, as shown to the south on Waterfront Drive and the surrounding East Exchange (Sakiyama, 2009; Schlesinger, 2015). Currently, the newer developments have stayed along the newly built road; however, additional investment along Higgins Avenue could pull development east.

Until 2004, the Downtown area had several different sets of development bylaws. In conjunction with a series of vision documents (Plan 2020, 2006, p.30) and amendments, it was decided to create a new downtown-specific set of bylaws to promote density, allow multiple uses, and protect certain areas like the Exchange District, Assiniboine Avenue, and

Riverbanks (Neighbourhood Inventory, 2008, P. 19). The new bylaw, 100/2004, created four zones (Multiple-Use, Downtown living, Character, Riverbank); these zones would promote the desired outcomes of Plan 2020, the precursor development plan to *OurWinnipeg* (Plan 2020, 2006) while providing flexibility to developers and stakeholders. northern downtown and the area that is part of SPD was zoned as multiple-use, giving it the most flexibility to build several types of buildings, including residential, commercial, offices, cultural, and even a certain amount of manufacturing. This multiple-use sector only extended to the boundary of downtown (Waterfront Drive) leaving the other half of SPD to be regulated by the City's main set of bylaws.

A secondary plan was initiated to examine the area from a planning and development perspective. A pre-consultation report and a report on the inventory of the buildings were drafted. While the recommendations from both documents highlighted the need for a secondary plan, and the civic committees recommended that the south area be identified as a priority for inclusion in the 2008 - 2009 Secondary Plan Work Program, the plan has stalled, with no progress occurring since the plan was put on hold (Council Minutes, 2015). While a specific area plan has stalled, larger city documents such as *OurWinnipeg* have identified SPD as an area of major redevelopment (Winnipeg - *Complete Communities*, 2011, p.29), which recommends the City consider options at accommodating growth and change (ibid, p.31).

As of late 2016, a new zoning district was created (TOD) and amended into the existing bylaws (PP&D-C, 2017). This new zone allows for "...mixed-use development at a scale and density exceeding all other districts. These sites are intended to be adjacent to rapid transit stations with a Council endorsed local area plan in place to guide development." (PP&D-A, 2017, S3 SS54.9). This TOD zone could be a tool to unify the different sets of bylaws that govern the area separately, and allow for evenly distributed development. Also in December 2016, the City issued an RFP for a functional design study on the ERTC. This study will re-examine which route alignment is more feasible: a southern route crossing through St. Boniface, or a northern Point Douglas route. This study is expected to be released sometime in 2018. In addition to the route, the study will also look at options for replacing the Louise Bridge, which is currently close to its age limit at over 100 years (Taylor, 2016)**.**

5.2.3 Current land uses and ownership

SPD history as an early residential neighbourhood transitioning to an industrial hub and its location near downtown, have created a large variety of uses. This includes housing, light to medium manufacturing, institutional and commercial spaces, and land owned by the City for parks. This section

looks at the various uses within the community. The two graphs (Table 5.1 & Figure 5.5) below show a breakdown of current land uses by both the SPD area as well as a breakdown of the parcel uses in the multiple-use sector downtown.

Name	Acres	% of Land Use	# of Parcels	Average Parcel Size (Acres)
Commercial	00.94	00.88%	2	0.47
Multiple-Use (Downtown)	45.95	43.17%	113	0.41
Manufacturing	01.52	01.42%	3	0.51
Manufacturing	48.82	45.86%	90	0.54
Riverbank	09.05	08.50%	7	1.29
Other	00.18	00.17%	1	0.18
Total	**106.45**		**216**	**0.49**

Table 5.1 Graph of Parcel Use in SPD (Winnipeg Assessment and Taxation Department, 2016)

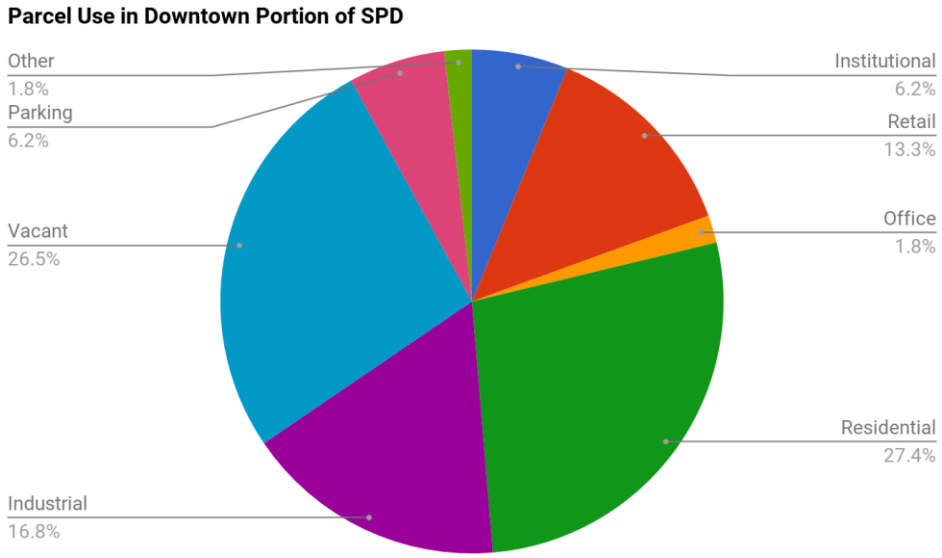

Figure 5.5 Parcel Use in Downtown SPD (Winnipeg Assessment and Taxation Department, 2016)

Industrial Use

Historically, SPD has been an industrial hub since the creation of the Canadian Pacific Railway line that bisected one neighbourhood into two in the late 1800s. Since then, the area has predominantly been industrial, experiencing very little change in land use. Of the 219 sites, 93 are listed as M1 (Light Manufacturing) and M2 (General Manufacturing) (Statistics Canada, 2011). These zones are "intended to provide for light manufacturing, processing, service, storage, wholesale, and distribution operations" (PP&D-B, 2017). These sites add up to 50 acres, equalling 47% of available land, see figure 5.6. The multiple-use sector zoning permits warehouses and manufacturing as long as it is entirely enclosed within its building. The average industrial lot is 2,185m^2 (or 0.54 acres), which can be fairly large for medium-sized development. While this land is currently owned by private owners, the availability of such large parcels is very positive for development and requires less work in terms of assembling and parceling adequate amounts of land (Pendall, et al., 2012, p.183).

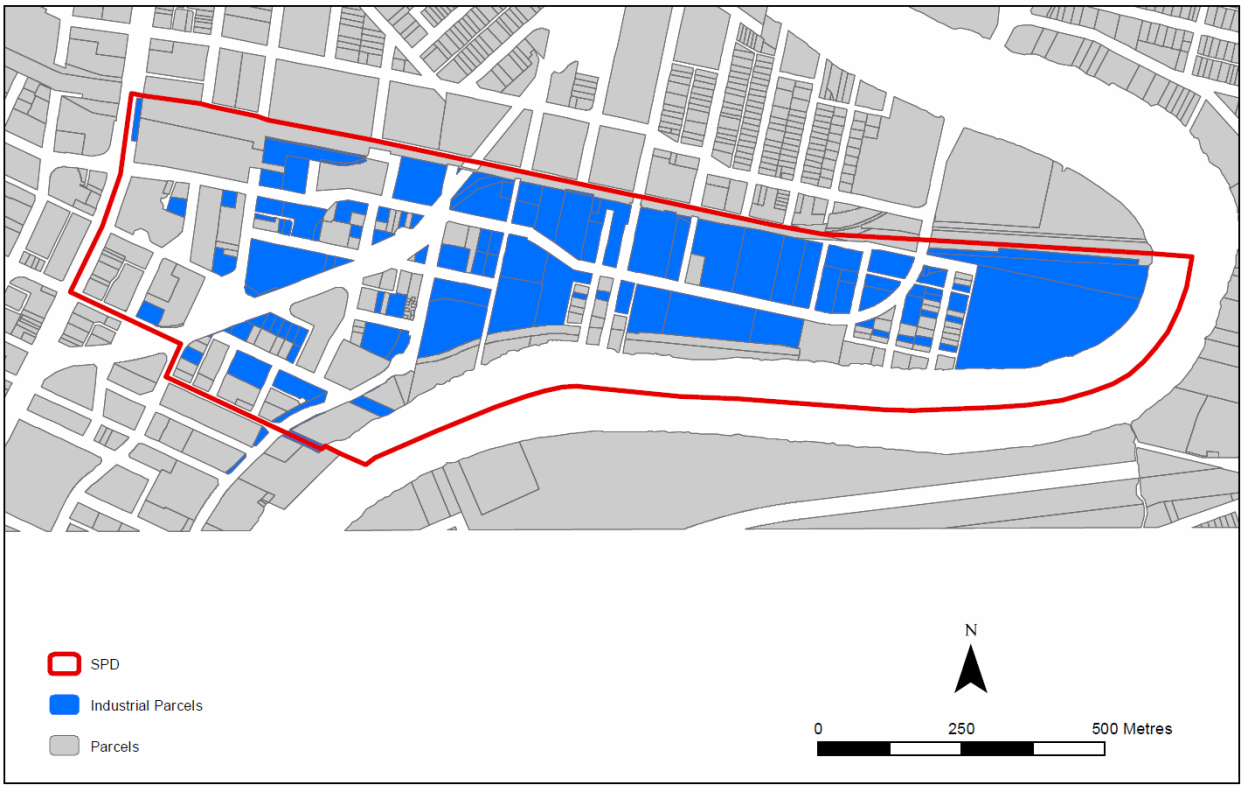

Figure 5.6 Map of Industrial (Neighbourhood Inventory, 2008)

Commercial/service use

The non-downtown portion of SPD contains only one property that is zoned for commercial use. However, there are no retail shops or service providers. The downtown component, which zoned for multiple-uses, does have some services including a hotel bar/vendor, a grocery store (May St Groceries), and several services located in the Centre for Aboriginal Human Resource Development Inc. (the former CP station). The Downtown portion of SPD is part of the Exchange District Business Improvement Zone (BIZ) (Downtown Winnipeg Biz, 2013), but that boundary stops at the edge of downtown and the remaining portion is currently not served by any BIZ (Figure 5.7). This is mostly due the industrial nature of that area.

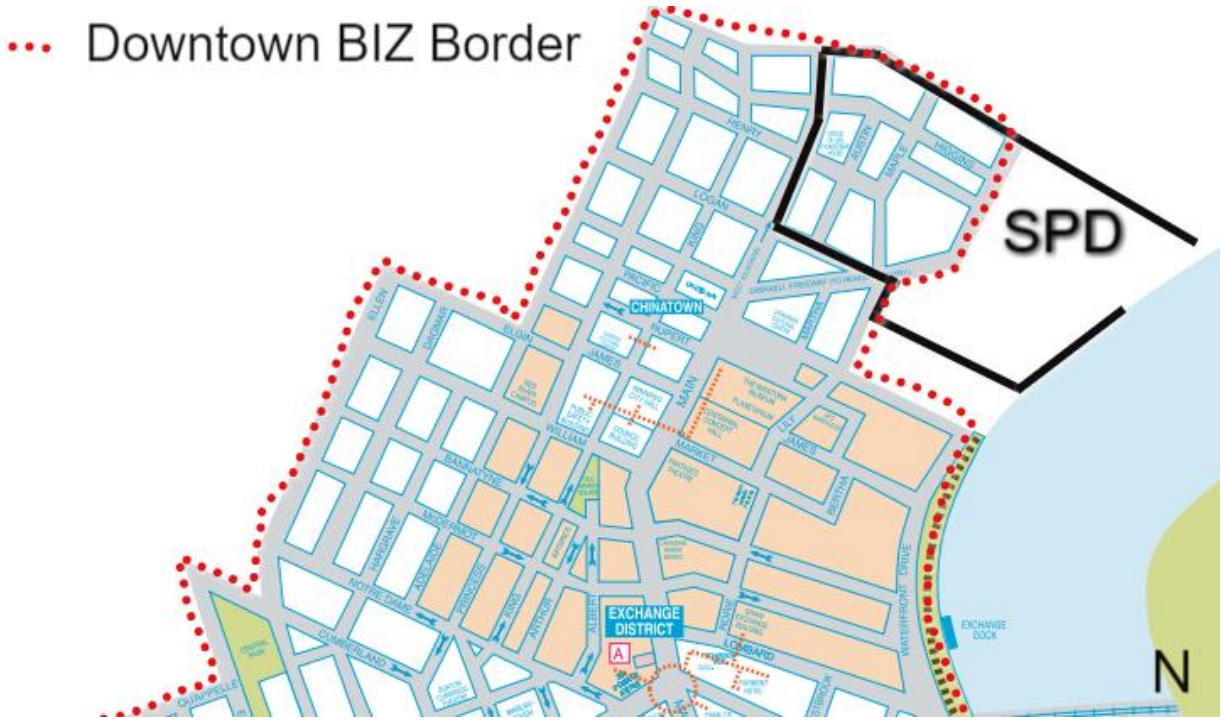

Figure 5.6 Map of Downtown Winnipeg BIZ (Downtown Winnipeg Biz, 2013)

Office and Institutional Use

There are 14 parcels with the class or parcel description of office and institutional; the majority of these are located in the downtown portion of SPD, while two parcels are zoned for commercial on the other side. However, these parcels are a Community Centre and a vacant lot. The downtown portion has two large institutional buildings — Salvation Army Booth Centre and the Manitoba Metis Federation — which, on top of providing services, also have offices.

Residential Use

The Downtown section has several residential development complexes and a dozen homes. The east side of SPD has 30 homes (Figure 5.8) but they are not zoned for residential use, potentially causing issues when major rehabilitation or replacement occurs. The homes on the downtown portion are fully permitted under the multiple-use sector.

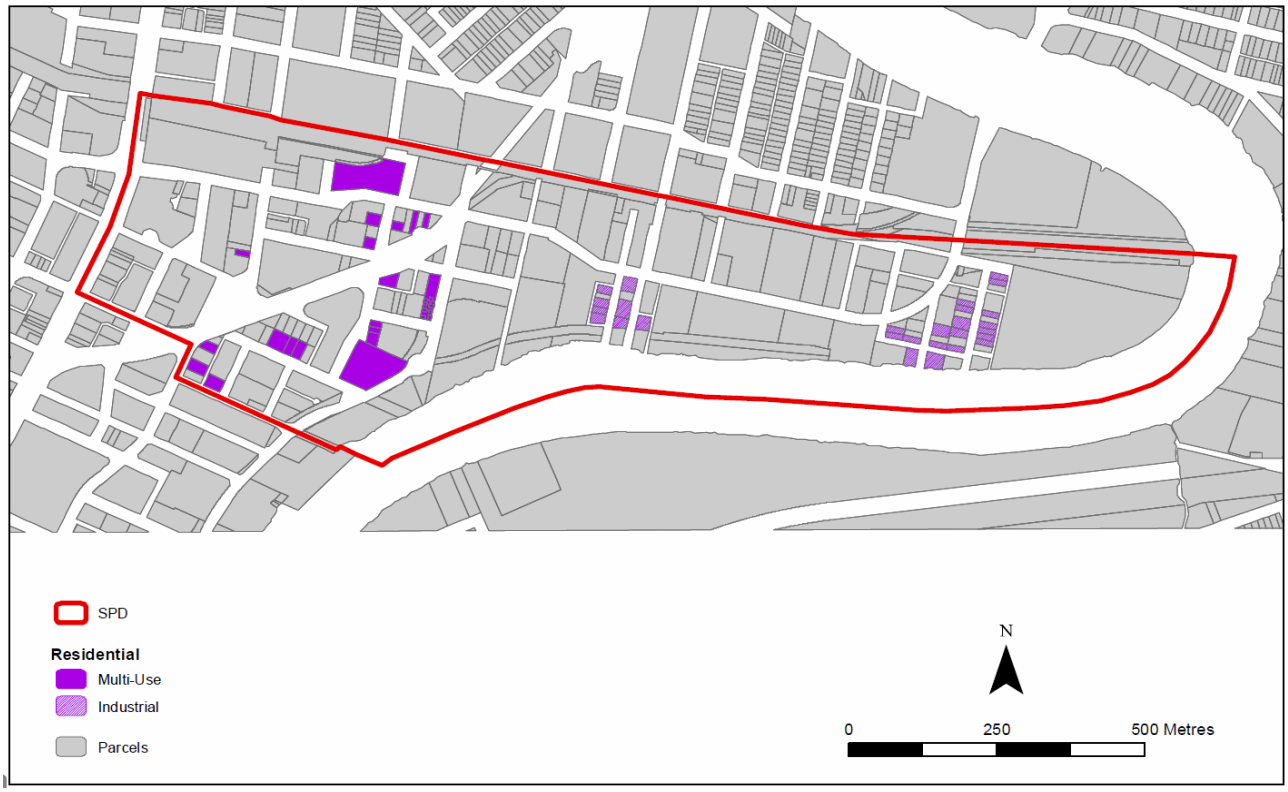

Figure 5.8 Map of Residential units (Neighbourhood Inventory, 2008)

The flexibility of the multiple-use sector allows for a variety of uses to exist together, from residential to institutions to breweries. These changes were cited as the reason for the Neeginan Learning and Literacy Centre and adjacent residential development (181 Higgins Ave), which has 43 units, including 15 3-bedroom family units to be constructed (Neighbourhood Inventory, 2008, p.8).

Recreation Use

In the downtown portion of SPD, parcels by the riverbank have been zoned as riverbank (Fort Douglas Park), which protects the area and "is intended primarily for the use and enjoyment of the public" (downtown bylaw on riverbanks). Development is restricted to public uses like parks, plazas, and boat docks. This zoning, however, stops at the Downtown boundary and similar land outside is zoned for manufacturing. There are other recreation centres in the area: two cultural centres, Thunderbird House and Casas dos Açore; one museum, The Fire Fighters Museum of Winnipeg; and a park, William Whyte Park.

5.2.4 Environmental Concerns

The current industrial uses are either vacant, storage or warehousing. Only seven lots are zoned as light or heavy industrial use. The largest plot of land has been designated as contaminated and the surrounding residential

homes around the site have been identified as areas of possible concern (Neighbourhood Inventory, 2008, p.23). Therefore, SPD would have to undergo significant rezoning, allowing an active industrial area to slowly change into a residential area with commercial, retail and offices.

As this land was industrial in past years, most of it has been assessed as contaminated (ibid). Adjacent properties were possibly impacted by the contamination, or of concern for contaminations. Contamination adds very large costs to a project's bill, requiring extensive excavation of the contaminated soil (Cervero, et al, 2004). This also creates disadvantages for the existing community through health risks from potential chemical remains. The contaminated sites have been concentrated to the east and north of the railway (Figure 5.9). Apart from that, six sites have been listed as areas of possible concern and four have been listed as impacted. There are still several large sites as well as lots of smaller sites that have no identified regarding pollution, and will need to be examined as development occurs.

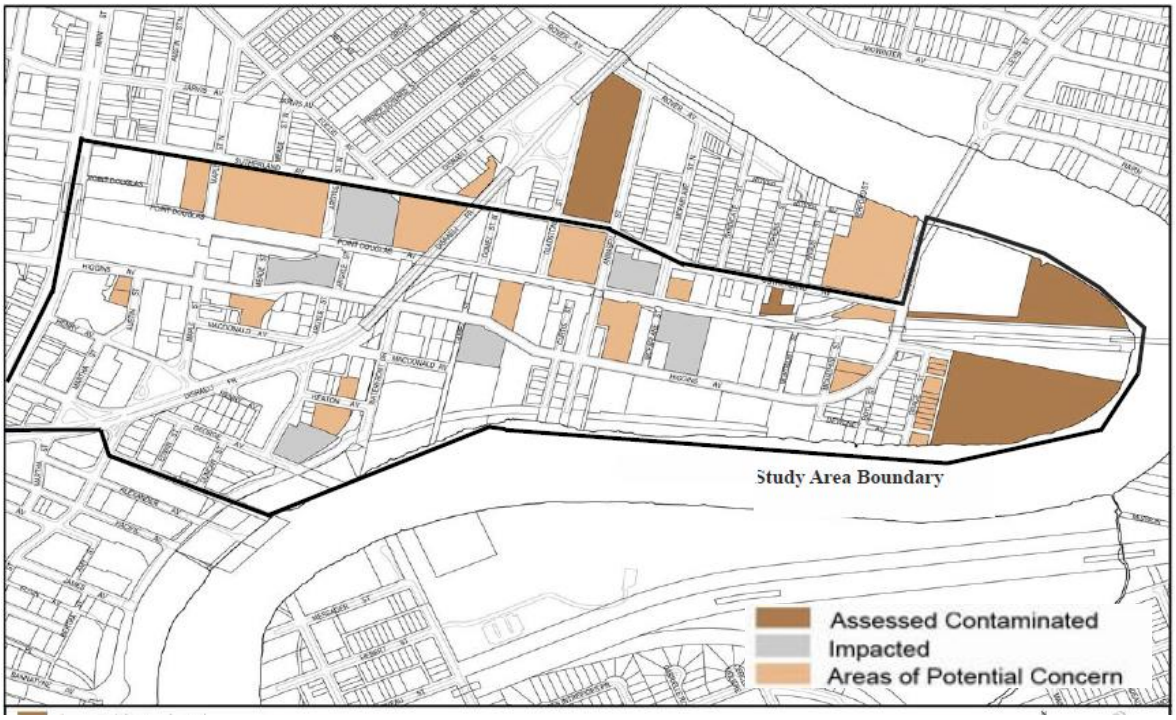

Figure 5.9 Map of contaminated sites in SPD (Neighbourhood Inventory, 2008)

5.2.5 Existing Community Demographics

This section focuses on the contextual circumstances for the existing community. Knowing this information will help to understand potential effects of introducing new development into the area. Furthermore, this will help to identify how potential changes will impact different groups of people,

and their potential response to the changes.

Firstly, the area has high resident turnover, which could suggest a highly transient population. Between 2001-2006, 80% of residents had moved to and from different neighbourhoods within the City of Winnipeg compared to 28% in the rest of the City. Between 2010-2011 that number dropped to 53%, but was still significantly higher than the remainder of the City, at 10.4%. However, these numbers did show a significant increase of residents who did not move (Table 5.2) (Statistics Canada, 2006; Statistics Canada, 2011).

	2001-2006		**2010-2011**	
Type	**SPD**	**Winnipeg**	**SPD**	**Winnipeg**
Did not move	20.00%	58.70%	46.90%	85.70%
Moved within Winnipeg	80.00%	28.00%	53.10%	10.40%
Moved within Manitoba	0.00%	3.30%	0.00%	1.10%
Moved within Canada	0.00%	3.20%	0.00%	1.00%
Moved Internationally	0.00%	6.90%	0.00%	1.80%

Table 5.2 Mobility in SPD (Statistics Canada A, 2011)

The number of residents spending more than 30% on shelter is measured at 30% citywide (Statistics Canada A, 2011). This number is not currently available for this location, making it difficult to compare the impact on shelter cost within this site and the City. This was also compounded by not having any available income data, although the area has three times as many people who have not completed high school, at 65.5% of residents. Only 17% of the population has obtained post-secondary, compared to 51% for the City (ibid).

The average rent in the area is significantly cheaper than compared to the rest of the City, at $402/month or just slightly higher than half at 53% compared to the rest of the City (ibid). Census data did suggest that every resident in SPD is renting and no one owns their home. However, the downtown portion of SPD now encompasses several new developments not covered by Census Data, including apartment-style condominiums, where a

recent scan of prices showed units valued between 200 and 400 thousand dollars (Remax, 2017).

With a global non-response rate of 30% to the National Household Survey, these numbers likely do not provide an accurate picture. However, they do show a contrast where previous residents who were generally poorer and had lower levels of education are now living with wealthier residents living in the newly constructed developments. With a change in population of 204% since 2006 (Statistics Canada, 2011), it shows that the contrast is slowly diminishing as the new resident profile overtakes the existing (Marcoux, 2015). Thus, newer development around the station area will eventually have an impact on existing residents and will cause some equality issues. Compared to other neighbourhoods in the Point Douglas - South Neighbourhood cluster, SPD is the smallest by a large margin, as shown in Table 5.3.

Community	Population (2011)
Dufferin	2215
Lord Selkirk	1500
North Point Douglas	2650
William Whyte	6295
SPD	700

Table 5.3 Population of Surrounding Communities in the Point Douglas South Cluster (Statistics Canada B, 2011)

However, the area did have explosive growth, at 200% compared to the previous census. This growth could be explained by redevelopment and growth at the southwest end near the East Exchange/Waterfront areas, which have had major infrastructure improvements in 2000, followed by some large scale residential development. Since 2010, hundreds of units have been added to the area (IUS, 2013). In addition, this development is moving north toward Higgins in the heart of SPD. One of the most recent additions is 5468796 Architecture's '62M' project which added 40 units on McDonald near the corner of Higgins Avenue.

5.2.6 Property Prices

Examining property prices in SPD is difficult, due to its location and the way it is included in the East Exchange catchment area for Multiple Listing

Services. Regarding residential properties, a conversation with staff from the Winnipeg Realtors Association indicated it has many similar qualities to the area adjacent to the north, 4A (North Point Douglas, North End) (Figure 5.10) (P. Squires, personal communication, March 23, 2017).

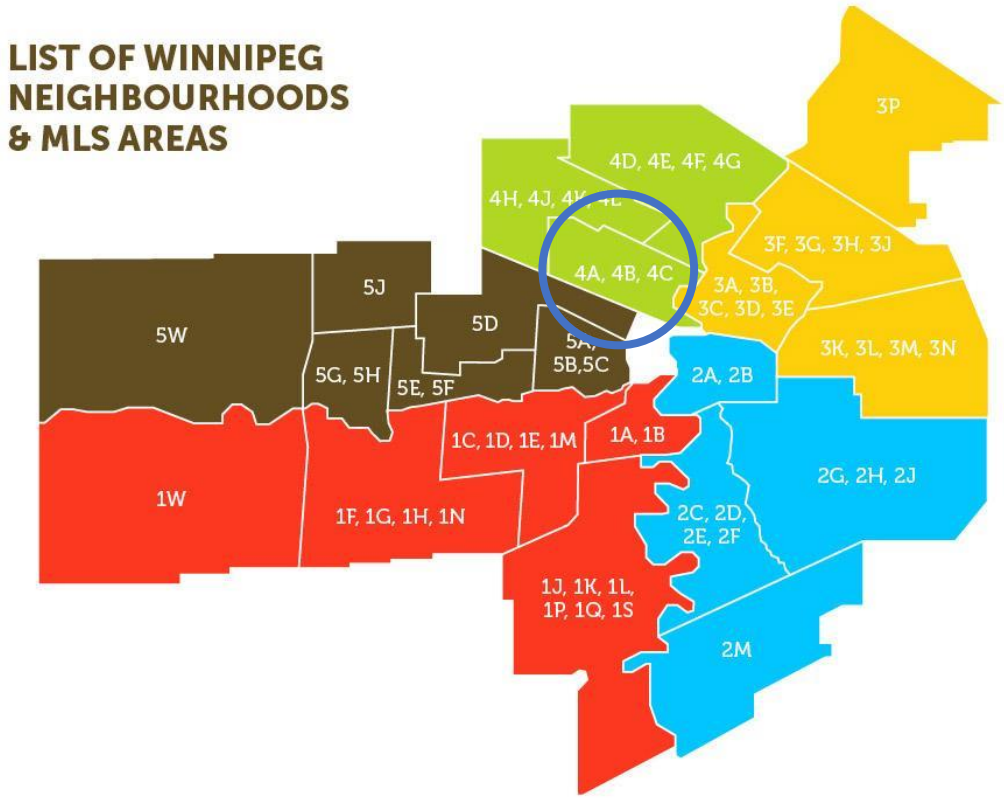

Figure 5.10, Map of MLS Areas in Winnipeg (MLS map, N.D.)

Compared to the other areas in North Winnipeg, 4A consistently had the lowest average house prices, at $125,383 in 2016 (2016 House Price in North Winnipeg). This price was on average half the price compared to the other areas (between 34%-79%) (Winnipeg Realtors Association, 2017). However, this low price has meant that the area has experienced the highest year-over-year growth, at an average of 6%, with an increase of 32% (or $40,120) since 2010 (figure 5.11 & 5.12) (ibid). Compared to areas in north Winnipeg, and the City as a whole, these lots are fairly inexpensive to purchase and develop on, and represent the majority of housing stock in the area, housing 71% of SPD residents (SPD Inventory, 2008). Residential housing, however, remains a small part of the land area, with only 65 housing units. While there is one cluster at the tip of the peninsula, they are scattered across the area.

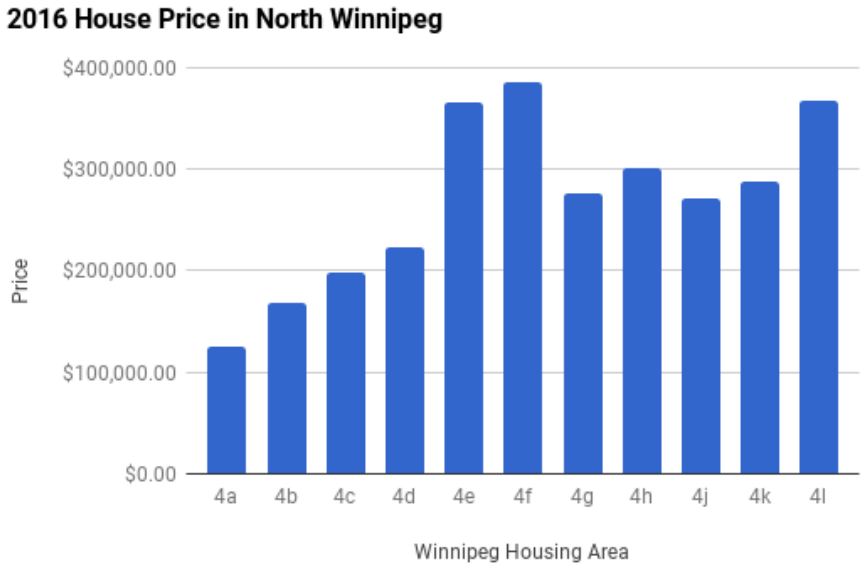

Figure 5.11 List of house prices in North Winnipeg (Winnipeg Realtors Association, 2017)

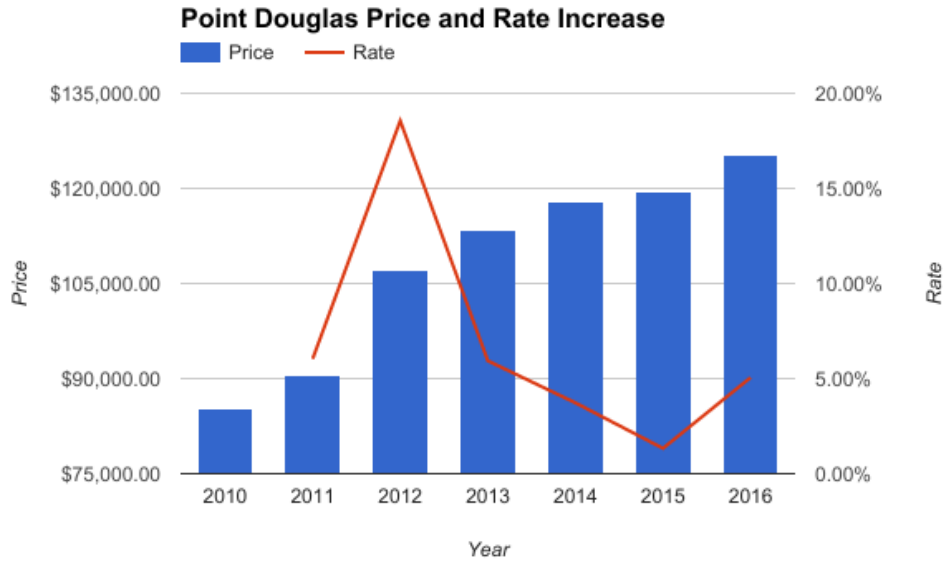

Figure 5.12 Price and Rate increase in SPD (Winnipeg Realtors Association, 2017)

5.2.7 Transportation Infrastructure

Three main arteries pass through SPD. Higgins Avenue crosses east-west, Disraeli Freeway crosses north-south, and Main Street crosses north-south. These roads represent some of the most travelled roads in the City, with average weekday traffic counts at 23,800, 41,000, and 39,000 respectively (Figure 5.13). They represent major access points to the northeast portion of the City, with limited options to divert. This access also

means a heavy amount of transit passes through the area, with nine bus routes (11,40,41,42,44,45,46,47,48), four being express routes (Figure 5.14). Higgins Avenue will remain a vital link for a larger city connection and will need to be considered if and when the City attempts to turn the east portion of SPD into a community.

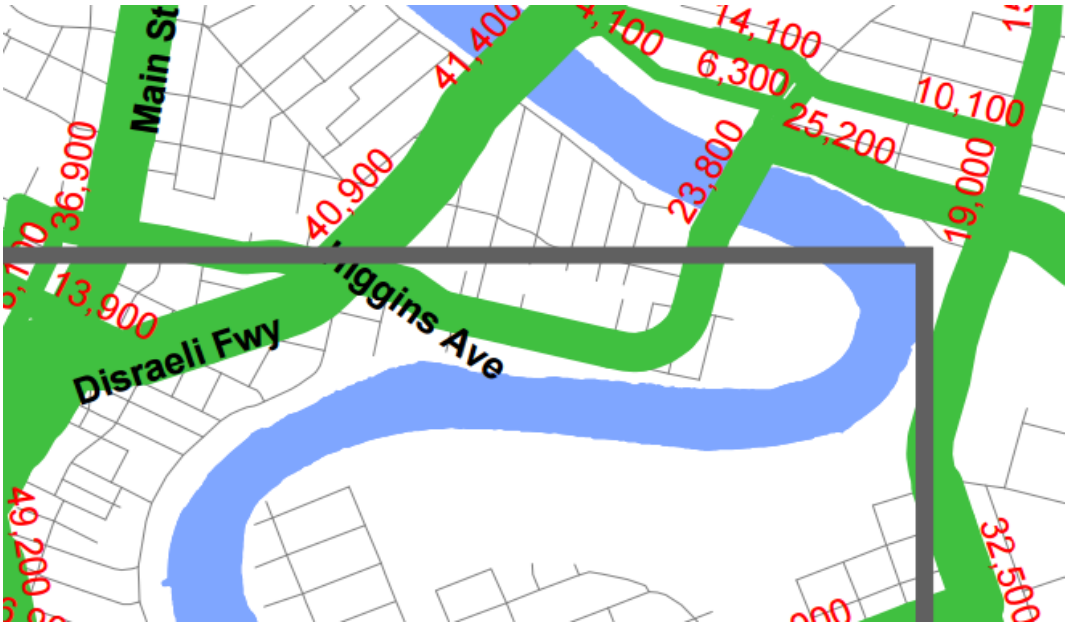

Figure 5.13 Traffic Map of SPD (Winnipeg D, 2016)

Figure 5.14 Transit Map (Winnipeg Transit, 2016)

Active Transportation (AT) counts for cycling were only provided for the Louise Bridge, according to the Bike Winnipeg 2015 bike report. Usage has dropped significantly since 2012, from a high of 175, and is currently the lowest since counts began in 2008 at 50 (Figure 5.15). A couple of factors contributed to this drop-in cycling in the area. First, there was increased active transportation infrastructure added on the nearby Disraeli Bridge, which now has twice as much traffic than the Louise Bridge since its opening in 2013 (Figure 5.16). Second, the current state of the bridge is very narrow and has regularly high levels of traffic, which may cause cyclists to avoid it.

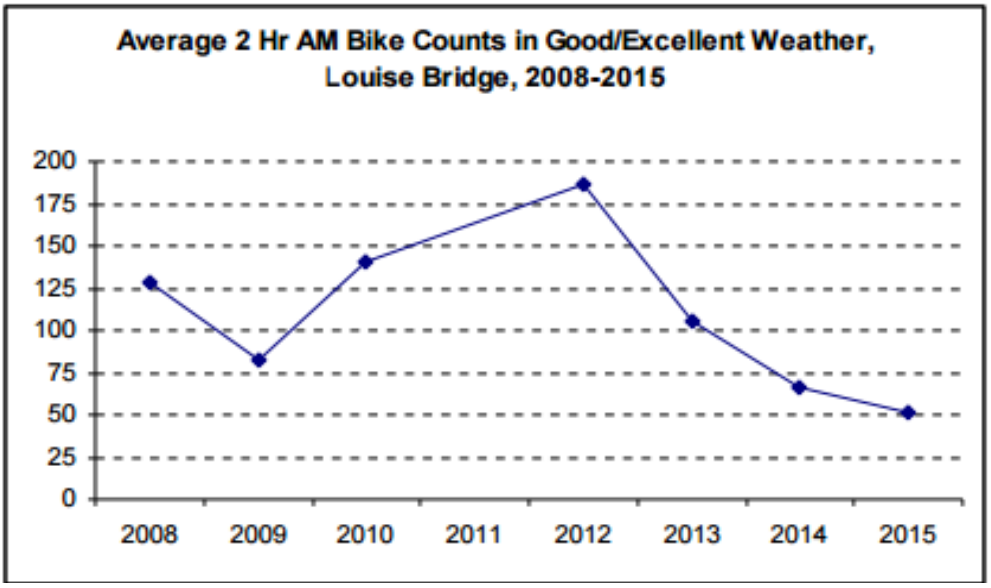

Figure 5.15 Bike counts at the Louise bridge (Bike Winnipeg, 2015)

Figure 5.16 Image of Louise Bridge (Google Maps C, 2017)

Regarding redient travel, the 2011 census indicated that the mode

share of SPD is 100% cars, with 20 individuals using them as their main mode to get to employment. However, this data is too small to draw conclusions. Looking at adjacent neighbourhoods showed that Civic Centre (the Exchange District), which shares a similar makeup to the newer development and has a portion of Waterfront Drive within its boundaries, shows 40% of residents walk and 60% drive (Statistics Canada C, 2011). If a similar pattern exists in SPD, the unreleased 2016 census may reveal a similar split. The Civic Centre community, which is adjacent to SPD, had no residents reported (Statistics Canada D, 2011).

SPD will always be a major link for a large portion of the City, and Higgins Avenue will have to accommodate large amounts of traffic, even with transit potentially being removed and directed on a transitway. Any development will have to accommodate this traffic, which may pose a challenge when trying to orient any community to pedestrians. The decrease in active transportation coincided with the deterioration of the Louise Bridge and the construction of an AT bridge beside the Disraeli Bridge (Bike Winnipeg, 2016). If any TOD development that occurs in SPD wants to facilitate the use of convenient and sustainable modes of transportation, including active transportation (as outlined in Winnipeg's TOD handbook) (Winnipeg 2011, p.21), then changes will have to be made to the area; in particular, to any reconstructed version of the Louise Bridge.

5.2.8 Summary

Since the introduction of the transcontinental railways, SPD has been in decline, moving from wealthy residential to industrial, with many buildings becoming vacant. This trend is similar to the adjacent Exchange District's experience. In the early 1990's, in response to this decline, the City set forth on a major revitalization effort to reclaim the waterfront and its historical features. These efforts, which have shown success, have been filling out and spreading north into SPD and Higgins Avenue. This has also been accomplished through simplified and streamlined zoning to allow a multitude of uses for various buildings around the area. The recent introduction of a new TOD zone, and the feasibility study of the rapid transit route and surrounding road network, should also result in greater analysis of the site and the ability to transition the heavy manufacturing uses in the non-downtown area to something else.

The current zoning of SPD has resulted in half the area (within downtown) to be identified as multiple-use, allowing offices, institutions, residential, and some retail, leading to a diversity of use as shown below. It has also been one of the major factors allowing the Neeginan Centre to expand into different areas, by having educational centres next to housing. The non-downtown half is almost entirely manufacturing (both light and

medium) with two commercial sites. While there are homes and a cultural centre, these are still built on land zoned for industrial and the stock indicated the last house built was in the ‘60s. This has resulted in some of the lowest property prices in Winnipeg for single detached housing.

Regarding environmental quality, there are several sites that are contaminated, a few impacted, and multiple areas of concern. This can drastically raise the cost of development and should be examined further, as many former industrial sites in the area have not been examined.

There is an identified contrast between the residents who live in the existing housing stock and the newer residents living in the developments along Waterfront Drive. Generally, the existing residents are poorer, less educated, and spend more on housing than the rest of the City. While the census has not provided information on the newer residents, the units they are purchasing are much more expensive, in the $200-300k range. This suggests a wealthier set of residents, who since 2006 have outpaced existing residents and now represent one third of everyone in the area. This influx of residents has also brought on higher rates of property crime compared to other types.

SPD also acts as a major thoroughfare for a large portion of the City, with tens of thousands of vehicles passing through its main road (Higgins Avenue) daily. Any attempt at site development will always have to work this into any future design to balance community needs and the larger city traffic requirements. This will be more relevant as the Louise Bridge is slated for eventual replacement. The area also lacks proper AT infrastructure, as shown by a consistent decline in cyclists going over the Louise Bridge. Lastly, while there is not much data available, most existing residents rely solely on their vehicles to commute, while residents in newly developed adjacent neighbourhoods more commonly use AT.

6.0 Analysis

This section provides an analysis of the previous data presented above. It explores their trends with the broader literature to highlight the main issues affecting the potential for TOD in SPD, the larger risks and barriers to TOD in the City of Winnipeg, and policy recommendations to overcome these barriers and encourage development.

While a large component of the success of a TOD depends largely on regional economics, there are several local challenges that stand in the way of successful TOD. In the case of Winnipeg and SPD, this includes: zoning issues, inconsistency in vision, political/community opposition, and Higher construction costs.

6.1 Zoning

Currently SPD is covered by two zoning bylaws: The City's downtown zoning bylaw to the west and the City's main zoning bylaw to the east. This results in inconsistency in the development occurring in the area, as shown in the site analysis of significantly different land uses divided by the zoning line. Winnipeg's downtown zoning was created to simplify development by establishing a more liberal list of permissible uses, spanning from residential to commercial to light industrial. This flexibility has shown to be a positive development feature with the creation of the Neeginan Centre, an institution mixed with housing. While only a somewhat recent change, downtown zoning will allow for the mixed-use development that TOD needs, such as residential, retail, services, and institutional land uses to occur. The west side, however, has been zoned as light and medium industrial, which has resulted in almost exclusively large manufacturing facilities. While there are different land uses in the area, these residences and establishments have been grandfathered in, and any major expansion would require a zone change to be approved (proven by a lack of additions since the 1960s).

Two distinct zoning districts can be problematic, especially depending on the station placement and the station area boundaries. If the station was set up primarily in the western portion, it would severely limit development adjacent to it, as currently commercial and residential would not be allowed (noted as a barrier in the literature review in section 3). To create an area with mixed uses and opportunities for residents and visitors, the City will need to change zoning in the area to allow this. This can be done in two ways (summarized in Figure 6.1).

Firstly, the City can expand the areas to fall under the Downtown zoning bylaw (PP&D-A, 2017, S1 SS100(1)). This would extend the western zoning rules to the entire area, allowing for different types of development to occur, while also putting the least restrictions on the manufacturing

businesses already there. Over time, the potential for higher property values can create an incentive for these businesses to relocate, allowing businesses that sell higher valued items (condos, luxury retail, and services) to replace them. In addition, this approach also simplifies the process for developers, as the zoning allows for many types of uses, saving a developer time and resources to get their project approved.

One negative aspect of this recommendation is that it may require extensive regulation changes. The Downtown Zoning Bylaw is intended to regulate just the portion of Winnipeg designated as downtown; anything that is not would fall under the general Winnipeg Bylaw. It may add confusion by placing another layer of complexity (which ultimately led to the streamlined set of rules for just downtown). While not in this practicum's scope, another possible negative aspect is this zoning change and longer-term land-use change could ultimately lead to a displacement and even loss of manufacturing jobs in the area. Those with more valuable parcels of land may be inclined to relocate to one of several other industrial parks, while those that may not be able to afford the move or rent in a new facility may simply stop operating when the owner retires.

Secondly, the City can use SPD as the first area to fall under its new TOD zoning. This would require completion of the secondary plan started in 2008. Completing the secondary plan would "Ensure that the use and development of land and building occurs in a manner that is well planned, orderly, and environmentally sound to achieve a vibrant, safe and healthy city" (PP&D-D, n.d., P.3). This would give the most control to the City (in consultation with the area) to create a community around the station that promotes the benefits of TOD while keeping it contextually appropriate to the surrounding neighbourhoods. While the TOD zoning shares similar attributes regarding flexibility of use, the TOD zoning does not permit industrial use, which would create an inconvenience to the existing manufacturing facilities. As such, they would not be able to expand without zoning changes or relocating to a different area of the City. However, given that the area has land uses that do not match its zoning (like the residential areas). While there is a possibility of conflict should the City be aggressive in enforcing the changes to the station area, this can be avoided with a grandfather clause.

SPD is identified as an area of major redevelopment for the City. *OurWinnipeg* and the *Complete Communities* documents emphasize the importance of planning to revitalize these areas. A BRT station can be integrated with a neighbourhood centre to act as the anchor for redevelopment, providing both a vibrant community for residents and an attractive destination for visitors (CC, 2014, p.66). A negative aspect of this

approach would be the time required to execute it and the political will to complete. As seen, an attempt to create a secondary plan was started, but ultimately did not go further than a draft. It is possible the administration was waiting for a major infrastructure improvement like the ERTC, but it is also possible there are unresolved issues from the first attempt.

A general consequence to both these potential solutions is that the city is trading its control over development agreement in favour of expediting the development process. By forcing a rezoning for each development, the City has the opportunity to enter into an agreement which can help pay for infrastructure, park space, or other amenities that the City may not be prepared to provide. However, the recent introduction of impact fees can help mitigate these issues by charging developers for new and significantly renovated properties (Winnipeg, 2017). Other tools like special area levies/taxes can help give consistency to developers for a fast approval process, while the City can still raise funds needed for area improvements.

While both options have their benefits, a more intensive and focused TOD zoning approach would allow the City to work with the community to realize the goals of both TOD and its conversion of major redevelopment sites over the long term. Expanding the downtown zoning district would provide shorter term gains without proper direction and leadership to create a fully integrated area.

Issue	**Two zoning bylaws over one community**	
Solutions	**Extend downtown district to all of SPD**	**Utilize TOD zoning district and create secondary plan**
Benefits	Would extend the Western zoning rules to the entire area, allowing for different types of development to occur. Would also put the least restrictions on the manufacturing businesses already there.	Gives the most control to the City to create a community around the station that promotes the benefits of TOD while keeping it contextually appropriate to the surrounding neighbourhoods.
Specific Negative	Added complexity to the non-downtown portion	TOD is more restrictive regarding industrial use Issues from first attempt to create a secondary plan may not have been resolved
Overall Negative	Possible displacement or loss of manufacturing jobs	

Table 6.1, comparison chart of solutions for zoning

6.2 Consistency in execution of the City's vision on TOD

One of the main criticisms from developers and planners was the lack of vision and direction within the City's approach for where and how TOD was going to shape Winnipeg. Developers building in mature communities felt demands from the various departments were inconsistent and left a lot of uncertainties. This was especially true regarding developer agreements, which would start as a standard template but change depending on specific wards and development types. While it was cited by most developers that a lot of additional changes to a developer agreement came from exiting area issues (water flow, traffic) there was also an agreement that substantial amount of changes were unnecessarily added. As stated by one developer, who has multiple projects in different parts of the City:

> ...maybe there's a standard template as a start, but there is a lot of negotiation that seems to take an extensive period. Even after you have your rezoning done, there are negotiations still ongoing with the developing agreement... (Private Developer 5)

They were also split in their opinion of how the City interprets *OurWinnipeg*, with some feeling city departments are at odds with each other (mostly the Planning Department and Public Works) when issues of traffic were present, with Public Works overriding decisions to ensure efficiency and flow.

Internally, this inconsistency was also noted through a lack of consistency in goals, priorities, and milestones. Currently, the existing system is very compartmentalized, allowing for different interpretations of *OurWinnipeg*, *Complete Communities* and the TOD Handbook by different departments. "They're [Public Works] old school and they like to be in charge. I think there's still this ... I think their perspective still very much comes from an auto-oriented focus" (Public Official 1).

These different interpretations have been the result of the different degrees each department has embraced TOD. In addition, this compartmentalization highlights the lack of a unifying voice within the public administration to create and maintain a framework in which to implement TOD. While the above documents outline what the City wants to achieve in transformative areas, like SPD, and how it wants to develop around BRT stations, it lacks the necessary mechanisms and a person responsible for TOD to ensure these visions are being followed through.

A dedicated "TOD coordinator" would be effective at ensuring consistency, both internally and externally. Externally they would represent a unified city voice to developers by working on their application the whole

way through and contacting other departments on their behalf. Internally, the coordinator could clarify the vision of TOD as set out by *OurWinnipeg*; when dealing with applications and other departments, they could ensure departments are not mired by traditional ways of thinking when lending their expertise to the development process. A dedicated person also has the opportunity to create institutional knowledge for the City by allowing the experience of development applications to be reviewed and analyzed for continuous improvement and potential innovation.

An additional hire may have negatives for the City. As this would be a dedicated role, it would require a new salary and resources to allow this person to work. As Winnipeg may have limited budget for additional staffing, it may burden them to have a staff member solely dedicated to this position. In addition, having this person will change current processes and may increase complexity by adding another layer of review or oversight to the bureaucracy. It may also bottleneck the process due to one person reviewing too much work.

Alternatively, the City may also wish to create an external committee, a TOD advisory committee. Its role would be to examine the broader implications of TOD on a network scale to create a network wide TOD strategy. Its function would be to review policy and development plans with a focus on ensuring proper execution of the City's TOD vision. Due to the myriad of departments involved with these decisions, the committee could report and provide recommendations straight to Mayor's EPC. The composition of the committee could be composed of:

- Council appointed councillor
- Member from the Development Community through the Urban Development Institute
- Planners
- Landscape Architects
- Architects
- Public members at large

Internally, this committee can be resourced with members of the public service (planning department, public works, and water & waste)

At a station area level, this committee can provide recommendations to be included with the planning departments report. On a larger scale, it can be tasked with presenting to the mayor and council the current and future status of development along the RT network. The mix between network and station level planning can allow the committee to differentiate TOD strategies at each station, focusing on residential for some while focusing different uses on others.

By creating an external committee, several key stakeholders can be brought in earlier to ensure buy in for any developments. Developers can have the opportunity to fully understand the City's vision and relay it to their members. It can also bring in citizen perspective through a public member at large to understand potential NIMBY issues that may affect station area planning.

A committee would have the same benefit as a dedicated member regarding institutional knowledge allowing members of the public service to develope finer skills on reviewing future projects. Additionally, a rotating schedule of external members can bring in new perspectives preventing the group from being stagnant. Finally, adding existing staff onto this committee would prevent the need to hire additional staff and the associated costs.

A TOD committee would need strong leadership and clearly defined terms of reference, otherwise it runs the risk of reverting to siloed decision making with each committee member ensuring its department priorities are incorporated. In addition, the calibre of the committee members would be limited to the existing staff's knowledge in TOD, which may limit the group's initial knowledge base.

While both options have their benefits, a TOD committee would take less time to establish as it would be formed by staff with existing knowledge. While there is a risk that the committee may revert to compartmentalized behaviours, with a mayor that is currently dedicated to rapid transit, it may have the strong leadership to overcome these barriers.

Issue	**Inconsistency in execution of the City's vision on TOD**	
Solutions	**Hire TOD Coordinator**	**Form TOD Committee**
Benefits	Externally: Represent a unified city voice for developers to consult with Internally: Clarify the vision of TOD as set out by *OurWinnipeg* when dealing with other departments.	
Specific Positive	Defined role within the administration to progress the City's vision for TOD.	A group with a clear mandate to examine the micro and macro issues for TOD on a network scale. Allows stakeholder engagement in a meaningful way through composition of group.
Specific Negative	Additional resources required for position.	Will be ineffective without strong leadership and clear terms of reference Limited to existing staff for member selection.

Table 6.2, comparison chart of solutions for TOD within the administration

6.3 Elected Officials

Both sides of the development community agreed elected councillors had the most power in the outcome of the development process. However, it was noted how this power was realized more through their opposition than through support.

For developers, opposition would be felt at community committee meetings where councillors would ask for additional items in a developer agreement not originally planned. This also varied depending on which ward a developer was building in (some being demanding more than others). Because of the ward system, councillors also respected each other's "area" and deferred decision making. This type of decision making runs in contrast to ensuring consistency and reliability along routes that often span across several wards. As TOD will often be on smaller sites compared to traditional greenfield development, ensuring consistency and reliability allows developers to maximize opportunities by evaluating sites at all stations. This is preferable to the alternative of evaluating stations that fall in more receptive wards and avoiding those that would block any attempt.

For public officials, this power was more formalized and structured; council was the main authority, with councillors chairing the standing and community committees underneath council. This created a flow that had a councillor be in the decision-making process at crucial times. While public officials should be objective and serve council, their recommendations can often be overridden by ill-informed decision making or community pressure. While the organizational structures of municipalities are outside of the scope of this project, public officials can work together to ensure consistency among departments when conveying the merits of developments to councillors. A mayor that favours TOD can also act as a political champion, debating and convincing councillors to accept this type of development. The mayor's support is beneficial, as he or she represents the whole city and would not appear to be overstepping into another councillor's area (Bertolini et al., 2009). However, under Winnipeg's council system, a strong mayor system, the mayor only has one vote, therefore his or her advantages would come from political capital and goodwill, which will be competing with other civic issues. Some councillors will always inherently disagree with the principles and oppose the very nature of this type of development. However, most will be reactive towards the wants and needs of their residents, and a strong NIMBY (Not in My Back Yard) movement can often pressure a councillor to serve the needs of an often very vocal minority and oppose denser developments.

One way to combat a NIMBY movement is to use the station area planning process to engage with citizens to understand what they want from

developers regarding amenities or design guidelines. These points will also be key to minimizing community opposition. As mentioned in the previous section, the TOD advisory committee can address this by consulting early on with several key external stakeholders to ensure buy in for any developments. Members of the development community and public can better understand the development implications of the RT network and how these station areas will help the City with its city-building goals.

While the City does do proper engagement through the planning department and office of public engagement, having the TOD advisory committee is a good way to properly contextualize development issues with a transit lens. The committee's work can help describe the benefits access to RT can provided to the community, whether it is reduced traffic constraints, revitalization properties, or increase to property value with minimal disturbance. In addition, by having a member of the Urban Development Institute on the committee, it can be a proper channel for developer concerns to be directly heard as an industry as opposed to a collection of developers.

Engagement will be especially important in SPD given the contrast in wealth demographics, ensuring that poorer existing residents will be able to voice their concerns about relocation through gentrification, and attempt to identify whether additional resources will be needed to ensure affordability. As well, because the area has a lot of potential building challenges (old industrial sites, contamination problems, and riverbank stabilization) it will be important to ensure that developers are on board to properly understand risks and find ways to overcome them.

Winnipeg does not have many examples of TOD for the public to refer to, ensuring that engagements are meaningful and result in successful projects are key. If projects become failures and residents can only reference bad examples it will make developing future station areas much more difficult as opposition will no doubt grow.

Issue:	**Political Opposition**	**Community Opposition**
Solutions	**Mayoral TOD 'Champion'**	**Use TOD Advisory Committee to provide transit context in engagement**
Benefits	Minimizes opposition by providing the City a voice to combat concerns and misconceptions that may derail a project.	
Specific Benefits	Allows debate among councillors who make decisions on development plans.	Provides neighbourhood an opportunity to voice concerns and be given examples of the benefits.
Specific Negative	Only effective if there is a figure willing to be a champion.	Bad TOD projects will diminish the effectiveness of future engagement.

Table 6.3, comparison chart of solutions for opposition

6.4 Developer Incentives

Necessary investment on infrastructure in the adjacent Waterfront community had large returns for the City, with developers constructing on almost every adjacent parcel of land along Waterfront Drive, which did not exist prior to this renewal and created opportunities for development that would not have occurred otherwise (Scatliff+Miller+Murray, 2001, p.2; Schlesinger, 2015; IUS, 2013, p.3). Developers who built in the area described the investments and direct financial subsidies, from the downtown residential development grant, as extremely important helpful to develop in an area that, at the time, was empty of people and full of derelict buildings. An extension of these investments down Higgins Avenue may continue the desirability Waterfront Drive has created, and would connect well with the eventual Louise Bridge replacement.

As noted in the literature review, one of the major financial barriers to inner-city development was the possibility of contamination and the high cost of remediation to make the site buildable. This was observed in SPD, with several sites being contaminated or of high risk of contamination. Further studies need to be conducted to get a present-day picture of soil quality in the neighbourhood to better gauge how large the issue is or whether it is concentrated to where the last study in 2007 identified it. Should the contamination prove to be more encompassing, this might create additional risks in a neighbourhood that has historically had low house selling prices. Financial incentives regarding assistance in remediation may need to be provided to encourage development in the area, as previous studies have identified (Cervero, et al., 2004; Kahn, 2007; Tan, et al., 2013).

Finally, there is a higher cost per square foot when constructing in a mature community (Altus Group, 2015; Cervero, et al., 1994). This was also supported by the private developers citing higher construction costs and land prices as the reason for higher selling prices. This has the potential to displace existing residents further and provide less housing choices and affordability for all residents of Winnipeg. In addition, SPD is already experiencing a greater rise in housing prices compared to surrounding communities (Winnipeg Realtors Association, 2017). To combat this, the City has many tools — both financial and regulatory — at its disposal to assist in keeping choice and affordability strong in the community. One such tool is providing a direct subsidy to lower costs and force the developer to lower their price for residents, much like the downtown Residential Development Grant Program (a grant program where the City offered up to $40,000 a unit in amortized tax relief for achieving an affordable price point for consumers, applicable to both condos and rental apartments). A direct subsidy would

give the City more control over price control by ensuring that units have to be sold or rented at a certain level as was the case with the Residential Development Grant. The negative to this method is that it will not solve issues that may exist in the area, it will just provide a one-time boost unless there are other amenities to draw future development. In addition, there is also the risk that subsidies will increase the profits to developers as opposed to being passed on to the end user in a meaningful way.

As extensive infrastructure needs to be constructed, and has shown to have major development returns, and extension of Waterfront Drive down Higgins Avenue may prove to be effective in spurring development. While this incentive comes with the highest upfront cost, as oppose to other incentives such as a per unit subsidy. This incentive allows the City to provide assurances to developers by committing to the area revitalization. In addition, it provides incentives by conducting the initial environmental assessments which will help determine which areas are in need of major reclamation. It also helps to lower servicing costs as the City can make improvements to water and waste lines before construction allowing for more density.

One negative to this, as mentioned in section 6.1, is how the City can raise the necessary funds. If the City was to re-zone the area to make it easier to develop, it will lose out on the opportunity to enter into developer agreements to help pay for these costs. Tools like impact fees and special area levies might be a compromise to shield tax payers, but it may decrease the attractiveness for developers. Having a TOD advisory committee would be crucial for having these conversations with the development industry to identify ways the area can get the needed infrastructure improvements that will allow developers to build.

Extending redevelopment efforts from Waterfront Drive to Higgins Avenue would be preferred as the area is in need of significant infrastructure rehabilitation, as well significant infrastructure from the transitway will need to be installed. Coordinating these projects to enhance the pedestrian environment will provide a valuable tool to define and attract residents, as well as potential buys, to the area.

Issue	**High construction costs**	
Solutions	**Direct unit subsidy**	**Area infrastructure redevelopment**
Benefits	Minimizes risk for developers	
Specific Benefits	Ability to control pricing to encourage affordable housing.	Provides neighbourhood amenities that buyers find attractive.
Specific Negative	One time boost, no residual benefits.	Very high upfront cost. May be difficult to raise funds to pay.

Table 6.4, comparison chart of solutions for developer incentives

6.5 Summary

While SPD currently has many barriers to succeeding as a TOD, these barriers can be overcome at the organizational level (Table 6.5). For the current industrial zoning that exists in the area, the City has a few options. Designating the area with the new TOD zoning district can provide a more meaningful engagement process to ensure that resident concerns are being met, and that City's vision for TOD (high quality, walkable mix of residential, employment and shopping opportunities) can be achieved.

Secondly, is the City's inconsistent vision on TOD, with too many people involved in the process and not enough coordination. Creating a TOD committee within the existing administration can provide this coordination by clarifying the vision of TOD as set out by *OurWinnipeg* when dealing with other departments, as well as representing a unified city voice when dealing with developers.

Thirdly, political influence towards development opposition was a large barrier for developers. Councillors could oppose projects based on value driven reasons sometimes in contrast to the City's vision and opinions from the administration. Having a mayor as a political champion can minimize this opposition by pushing forward with the Vision as oppose to localized ward interests.

Lastly, the higher costs for potential remediation and construction were seen as a big risk and deterrent for developers. Previously, the City was able to assist developers by providing infrastructure incentives and direct subsidies. These initial investments had a large return that is still ongoing. As SPD shares characteristics of a pre-developed Waterfront Drive, an extension of these investments down Higgins may minimize the risks needed to fully build out the area.

When properly executed, transit infrastructure and TOD planning has the ability to encourage denser living and easier access to amenities, housing, and employment. It can turn underutilized areas into new communities or retail/commercial centres. This smarter growth allows cities to achieve higher populations without using acres of greenfield land and creating newer additional services such as hospitals and schools. In addition, the added access created by TOD, creates a desirability that grows real estate values and add higher premiums on units surrounding a transit station. These premiums can result in an increase an property tax which ultimately leads to more revenue for the municipality.

Issue	Two zoning bylaws	Inconsistency in City's vision	Political and Community Opposition	High construction costs
	TOD Zoning District	**Creation of TOD Advisory Committee**		**Area infrastructure redevelopment**
Benefits	Gives the most control to the City to create a community around the station that promotes the benefits of TOD while keeping it contextually appropriate to the surrounding neighbourhoods.	Externally: Represent a unified city voice for developers to consult with Internally: Clarify the vision of TOD as set out by OurWinnipeg when dealing with other departments.	Minimizes opposition by providing the City a voice to combat concerns and misconceptions that may derail a project.	Minimizes risk for developers.
		A group with a clear mandate to examine the micro and macro issues for TOD on a network scale. Allows stakeholder engagement in a meaningful way through composition of group.	Provides neighbourhood an opportunity to voice concerns and be given examples of the benefits.	Provides neighbourhood amenities that buyers find attractive.
Negatives	TOD is more restrictive regarding industrial use	Will be ineffective without strong leadership and clear terms of reference Limited to existing staff for member selection.	Bad TOD projects will diminish the effectiveness of future engagement.	Very high upfront cost. May be difficult to raise funds to pay.
	Issues from first attempt to create a secondary plan may not have been resolved			

Table 6.5, Summary of recommendations

7.0 Conclusion

Transportation infrastructure can have a major effect on development and the shape of cities (Dittmar & Ohland, 2006). When transportation and development are planned together via TOD, a city can realize many benefits: higher property taxes through increased property value, neighbourhood revitalization, and the creation of new destinations for residents. While there are many barriers at the municipal level that can prevent a development from reaching its maximum potential, each one can properly be addressed and overcome.

The goal of this practicum was to investigate the opportunities and challenges for TOD in mature communities in the City of Winnipeg. I interviewed public officials and private developers to determine which issues are the most prevalent facing Winnipeg and the opportunities to overcome those barriers. I applied these findings to an anticipated SPD station to inform potential challenges and opportunities for the TOD surrounding this BRT station.

This section concludes my practicum by revisiting and answering the initial research questions that guided this practicum and their implications for the City as it progresses with its BRT network buildout. Finally, this conclusion will also elaborate on areas for future research that were not fully examined due to scope limitations.

7.1 Review of research questions

This practicum investigated the opportunities and challenges for TOD in mature communities (focusing on SPD) along the Eastern Bus Rapid Transit Corridor in Winnipeg. To research this, three questions were posed to guide the research and focus its direction. This section revisits and answers those questions.

7.1.1 Question 1 - Risks and Barriers

The first research question was, what risks and barriers do developers face when building bus-rapid-TODs in mature communities? This question was answered using semi-structured interviews with the private developers.

To frame the response to this question, it was important to understand the more general development issues that most communities face, particularly in North America. Based on the literature review, these general barriers were categorized into four areas:

1. Fiscal - Questionable market viability was cited as a barrier by developers, who were in favour of more predictable single detached housing as opposed to the perceived risk associated with multi-unit housing.

2. Political - The City must balance the desires of multiple stakeholder groups, which have varying agendas and goals, some of which are in direct conflict with others.

3. Structural - New transit infrastructure is built on lower cost and less-developed land to minimize capital costs and community opposition; however, these areas are less desirable for achieving goals of transit ridership.

4. Regulatory - Regulations and zoning requirements favor single use development, putting the onus on developers to justify higher density development.

These barriers were then incorporated into the interview schedule for private developers to understand which of these barriers was more of an issue for the City of Winnipeg than others. While answers varied by developer due to differences in development type, location, and business size, most of the barriers were mentioned, with some considered more pronounced in the City than others.

Developers noted existing challenges to building infill developments in mature communities compared to developing greenfield sites. Challenges included the potential remediation requirement prior to development; ensuring the capacity to service more development in an already built-out environment; and parking minimums that prevent, limit, or dictate how many units could be built on a site. In combination, these challenges increase the financial cost of infill development, making infill less ideal that greenfield development.

Politically, while dealing with stakeholders was an issue in some cases, elected officials had largest influence in development. This influence was noted through amendments to developer agreements and ability to indirectly influence necessary voting.

The inconsistency, and even contradiction, in executing the City vision created another barrier for infill development to occur. In particular, the Public Works Department would override decisions that would be more conducive to TOD to ensure efficient traffic flow. This created uncertainty among developers, especially when the City Planning Department would be

encouraging of this type of development. Consequently, developers wondered whether the City really was prepared to embrace TOD and infill development in general, leading to questions about whether it was worth taking on the risk of TOD.

7.1.2 Question 2 - Opportunities and Challenges

The second research question was, what are the opportunities and challenges for the City of Winnipeg in encouraging TOD at a station area in SPD? This question was answered primarily with the use of a site analysis of the area, examining it through different lenses. Aspects such as zoning & land use (what the existing area makeup is and how much space it takes up), environmental (conditions of the sites), and transportation (how the infrastructure affects both the community and the larger city) added context on top of the larger literature review and broader Winnipeg issues identified by developers.

One current challenge is half of SPD is zoned industrial and actively used for industry. It will be difficult to make short-term changes without first changing the zoning. Two possible options include rezoning the land to either the newly created TOD zone or extending the downtown mixed-use sector zoning to include all of SPD (as opposed to just the Exchange District portion). While immediate land-use changes might be slow due to the established businesses, when the Exchange District portion was re-zoned to allow a multitude of uses, significant change eventually ensued, including new residential, retail, commercial, and educational institutions. Changing zoning bylaws is an important first step in bringing about the required change.

Regarding environmental quality, there are several sites that are contaminated, a few impacted, and multiple areas of concern. These concerns can drastically raise the cost of development, and should be examined further, as there are many other former industrial sites that have not been surveyed.

Another challenge is the identified contrast between the residents who have long been living in the existing housing stock and the newer residents living in the developments along Waterfront Drive. This influx of residents has brought on higher rates of property crime as compared to other types; while there is no stated reason, one assumption is that the newer residents are wealthier and possess better assets, creating opportunities for theft. While most of the existing residents live in areas not properly zoned for residential, a zoning change should allow major rehabilitation to those houses, which are not newer than 50 years old. This would allow them to improve the value of their home.

Lastly, SPD will continue to be a major link for northeast Winnipeg and its downtown, carrying tens of thousands of vehicles and transit passengers daily. Any attempt at site development must work this into future designs and seek to balance community needs and the larger city traffic requirements. With the reconstruction of the Louise Bridge, there is an opportunity to bring much-needed active transportation and other transportation infrastructure to the area, allowing a community to grow while also facilitating the City's larger transportation goals.

7.1.3 Question 3 - Policy Changes and Incentives

The last research question was, what policy changes and incentives can the City adopt to encourage developers to build at station areas in mature communities like SPD? This question was answered primarily with the responses from interviews with public officials and private developers.

Regarding policy changes, the most noticeable theme in the City's approach to TOD was the lack of approach. Public officials were not sure of the main priorities, milestones for measurements, or even the vision of what TOD should look like in the City. While the City has done preliminary work via its TOD handbook, it should now look at creating a more contextual plan along the ERTC route, applying its typology to the existing conditions. Creating a dashboard or annual review of TOD progress along the SWRTC would also be a way to measure the City's impact on encouraging development around stations.

In addition to the lack of vision and priorities, it was not clear who is responsible for ensuring the success of TOD in Winnipeg. The existing process is very compartmentalized, bringing in subject matter experts when needed, but lacking oversight on the entire process. It was unclear among public officials whether any additional resources were needed to help facilitate TOD, despite the different nature of TOD compared to the existing built form and development process. Changing corporate structure by hiring additional staff and formalizing roles would allow developers and other stakeholders to have access to a specialized subject matter expert that could acquire institutional knowledge for the City.

Regarding incentives, there is naturally a higher cost per square foot when constructing in a mature community. Construction costs and land prices are cited as the reason for higher selling prices. This has the potential to displace existing residents further and provide less housing choices and affordability for all residents of Winnipeg. The City has many tools — both financial and regulatory — at its disposal to assist in keeping choice and affordability strong in the community. Along with proper planning during the

station area master plan stage, a strategy should be created to utilize these tools.

Finally, the literature review noted that one of the major financial barriers to inner-city development was the possibility of contamination and the high cost of remediation to allow for development. This was observed in SPD, with several sites being contaminated or of high risk of contamination, and was also the case in Fort Rouge. Further studies will need to be conducted to get a present-day picture of soil quality around station areas along rapid transit corridors to better gauge how large the issue is. Should the contamination prove to be more encompassing, this might create additional risks in a neighbourhood that has historically had low house selling prices. Financial incentives regarding assistance in remediation may need to be provided to encourage development in the area (Cervero, et al., 2004; Kahn, 2007; Tan, et al., 2013).

7.2 Further areas of study

Given the scope of this practicum, and the lack of station areas and examples for interviews to draw on, some areas of this research were not answered effectively. Therefore, there are various opportunities for additional research relating to TOD in Winnipeg.

Firstly, all the focus was on one potential station area, SPD. As a transit network is greater than the sum of its parts, additional analysis should be conducted focusing on all potential stations areas along the ERTC. Macro analysis would provide a better view in regard to what type of real estate can be supported along the line, and what a station area should specialize in; in the case of SPD, it may be determined that manufacturing and light industrial still has a place in the are and that a station area should recognize this when being developed. This would be the larger role of the TOD advisory committee to determine and to work with external stakeholders to see where there currently is demand and how that can be aligned with supply. Finally, this type of network analysis can help determine incentives by identifying priority and non-priority areas. Identifying this can allow the city to focus their tools to provide more efficient incentives for developers.

Next, the largest question that remained unanswered was the vision, metrics and milestones for TOD in the City. These critical questions will have big implications for the City in how it measures success of its TOD (whether it focuses on ensuring higher ridership or that it can increase housing opportunities for residents). While staff are familiar with these metrics, they may become more widely used once the City has had experience using them

with success. An enhanced framework with local context and definition, backed with a vision, will be extremely beneficial for future station planning.

While the research was focused just on municipal barriers, transit infrastructure is not solely dictated by a municipal direction. Transit is greatly influenced by provincial and federal (and in some cases municipal) mechanisms, primarily through funding and land availability. In addition, while a big part of the literature review, financial mechanisms were not fully brought out in the interviews with key informants. These mechanisms include tax increment financing, land value capture, land banks, and inclusionary zoning. As it was identified there was a positive correlation between development land values and its proximity to transit infrastructure, planning staff at the City would benefit from gaining a better understanding of the applicability of these financial tools, which may provide much unrealized resources to support TOD efforts.

On the social side, this practicum focused mainly on development barriers in mature communities. Examining issues such as parcel sizes and land use did not fully recognize the existing population that inhabits these communities. There was little examination into ensuring equitable development without causing displacement to the existing population, either through eviction or no vacancy in cheaper units. Additional research into social inclusion and development in Winnipeg would provide a critical analysis on whether the City's development process ensures that residents who choose to remain will have options to stay.

Finally, at the time of this study, SPD has not been confirmed as a station area, as is with all station areas along the ERTC. The City would benefit from a larger market analysis of the entire corridor to examine where demand for development is highest and where availability of land is the greatest, while incorporating the factors previously mentioned. This type of corridor analysis would ensure that station areas had been optimized when selected, making development much easier. TOD is very contextual and depends greatly on the built form of the station area. This practicum only examined the barriers for mature communities, which will only account for a handful of station areas along the ERTC. Recent communities and new communities will comprise of the larger bulk for station areas, presenting their own unique challenges.

7.3 Closing

This main goal of this practicum was to explore TOD, a relatively new concept of development for the City of Winnipeg. The City is currently in the construction phase of the 2nd portion of the SWRTC and the planning phase of the ERTC. This new transit infrastructure is providing the opportunity to create new communities and housing types for Winnipeggers, as well as revitalize old ones. With housing prices and rent rising, innovative residential development alternatives can increase the existing housing supply while consuming less land, allowing for more housing units to be created.

With any new concept, risks and barriers are presented that challenge the existing rules. Identifying these issues is the first step toward addressing and eventually overcoming them, to maximize the benefits of TOD. While the City has started to recognize the potential of TOD, it still remains as an abstract theory. More clearly defining a vision, goals, and benchmarks can focus efforts to engage with developers and create truly accessible communities. Finally, while this analysis and the recommendations were specified for Winnipeg and SPD, these issues may be applicable to other site locations and municipalities attempting to encourage TOD along their rapid transit lines.

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9.0 Appendix A- Interviews
9.1 Interview Schedule for Developers

1.0 Intro Questions
1.1 What is your position within your firm?

Prompt: What does the role entail?

Prompt: How long have you worked in that role?

1.2 What percentage of your projects are multi-unit developments?

1.3 What percentage of your development projects are in mature communities?

1.4 What is your makeup of rental units to selling units?

2.0 Barriers
2.1 Is it more affordable to build infill versus greenfield in Winnipeg, why or why not?

2.2 What are the biggest risks and uncertainties that you face in developing infill developments?
Prompt: Is the required amount of parking a barrier?

3.0 Financial Barriers
3.1 How does your firm typically finance projects?

Prompt: does this change the more you go towards infill style developments?

Prompt: If more difficult how so? What are the reasons?

3.2 Would a subsidy encourage you to develop in mature communities?

Prompt: What would it have to entail to be enticing?

3.3 Are you familiar with the City's Downtown Residential Development Grant Program? (This was a grant program where the City offered up to $40,000 a unit in amortized tax relief for achieving an affordable price point for consumers, it was applicable to both condos and rental apartments.)

Prompt: Would this encourage you to develop affordable housing in the downtown area?

4.0 Organizational Barriers

4.1 Are city councillors or other elected officials key to moving a project quickly?

4.2 Would you say that the City of Winnipeg and its planning document OurWinnipeg are aligned in terms of encouraging development and facilitating complete communities like TOD?

4.3 How much time do you spend dealing with local government compared to other key stakeholders?

5.0 Market supply requirements

5.1 What has the City typically demand from you in terms of a developer's agreement on past projects?

Prompt: Has the City been consistent in its developer agreements with you?

6.0 Conclusion

6.1 Is there anything else you would like to add?

9.2 Interview Schedule for Public Officials

1.0 Intro Questions

1.1 What is/was your position within the City? Have you reviewed TOD projects in that position?

1.2 Have you worked in a similar position in regards to municipal development?

Prompt: if so, please describe

2.0 TOD questions

2.1 In your opinion, what are major priorities for TOD?

Prompt: Do you feel these priorities are consistent within the organization?

2.2 What do you think are important metrics or milestones for measuring the success of a TOD? I.e. units created, value captured, commercial/retail added?

3.0 Political Barriers

3.1 What is it like working with other city departments in regards to planning and implements major elements of TOD?

3.2 What role does Transit have in the planning of station areas?

3.3 Given the long-term nature of TOD community development, who, if anyone, is accountable for implementation outcomes?

4.0 Lessons learned - Southwest Rapid Transit Corridor (SWRTC)

4.1 How much experience did the City and its departments have in TOD prior to the SWRTC?

Prompt – how much extra resources were needed to expand this area of knowledge?

4.2 What have been the major challenges when trying to develop the Fort Rouge Yards?

5.0 Cost Barriers

5.1 What goes into reducing parking minimums on developments?
Prompt: should the City ever consider allowing a development with zero parking units?

5.2 In your opinion what role should the public sector play in addressing developer barriers to the implementation of TOD?

5.3 How does the City view/treat value captured revenue from infill developments or other special projects within a mature community?

6.0 Overcoming Barriers

6.1 Do city councillors or elected officials have great influence in determining the progression of a project?

7.0 Concluding Questions

7.1 Is there anything else you would like to add?

9.3 Interview Package

City Planning
201 Russell Building
84 Curry Place
Winnipeg, Manitoba
R3T 2N2

Interview Consent Form

Research Project Study: *Examining Municipal Barriers for Developers around Bus Rapid TOD Station Areas in Mature Communities, an Analysis of Point Douglas, Winnipeg, Manitoba*

Principal Investigator: James Cook, Graduate Student, Master of City Planning, Faculty of Architecture, University of Manitoba

Advisory Committee: **Supervisor –** Dr. Orly Linovski, Assistant Professor, Department of City Planning, Faculty of Architecture, University of Manitoba

Internal Advisor – Platt, James, B.A., M.C.P., MCIP, Adjunct Professor, University of Manitoba

External Advisor – Justin Rebello, MEDes, Project Manager, T.O.D and Special Projects, City of Calgary

Introduction

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Purpose of Study

My proposed research focuses on TOD in mature communities in Winnipeg, Manitoba, and will investigate barriers, and opportunities for improvements relating to the development process in mature communities. Some information for this study will be gathered through semi-structured interviews with key informants in the City of Winnipeg planning and development community.

This research also presents a unique opportunity for developers and planners to better understand the effects of development around bus based rapid transit. Currently literature in this area is growing but lags behind other modes of transit such as light rail.

The purpose of this research will be to produce recommendations and strategies for City of Winnipeg officials to encourage and support TOD; these recommendations will also be useful to other municipalities attempting to encourage TOD in their inner-cities.

The Interview Process

If you choose to participate in this project, you will be asked a series of open-ended questions (i.e., a semi-structured interview) about your professional involvement in TOD and infill development in Winnipeg.

The interview will be done in person and is not expected to exceed one hour in length. It will be held at a time and location that provides reasonable privacy and is agreeable to both of us. You can refuse to answer any questions, and may end the interview at any time. The interview will be audio-recorded, and transcribed. If you do not consent to being audio-recorded, the interviewer will take notes. You will have the option to see the transcription prior to the publication of this project to ensure accuracy. Upon your request, the interview can also be conducted through different means if you are unavailable to meet in person (e.g., via email or telephone).

Should you request confidentiality, no personal information will be recorded except for your stakeholder affiliation (e.g., Developer, Past/Present City Official). If you can be identified based on your stakeholder affiliation or job title, this information will be obscured. Pseudonyms can and will be used in the interview transcript, if requested

There are minimal physical, psychological, and/or emotional risks related to this project. With your participation, you will be given the opportunity to share your thoughts, knowledge, and expertise on an urban issue that is gaining prominence and importance.

Confidentiality

Unless confidentiality is requested, once the interview is transcribed and your approval of the transcript is received, the data, including personal identifiers, will be released and included in the project.

The interview transcripts and associated data will be stored in a secure location on a secure web based storage platform with two step password verification. Once the interviews are transcribed, the audio recording electronic file will be destroyed. All typed and/or hand-written transcripts of interviews will be destroyed one year after the final submission of this practicum (i.e., approximately winter 2017).

Feedback and dissemination

I will be providing you with your interview transcript to review and confirm before it is finalized. The transcripts will be sent via email or post to you within one month of the interview. Once sent, you will have three weeks to approve or verify the transcript. You will also be given an electronic or paper copy of the final practicum at your request, once it has been approved by the University of Manitoba. This is expected to occur in winter 2016.

The results of the study will be disseminated through the University of Manitoba in an electronic format through the Library's thesis repository website (Mspace). I will also be presenting the project at my oral defense. I may also write conference papers or journal articles (which may be published) in the future relating to the research findings of this project. Future publications will be dependent on a review by you to determine whether their information can be added in these publications.

Voluntary participation/Withdrawal from study

Your decision to take part in this study is voluntary. You are able to refuse participation or to withdraw from the research study at any time. If you decide to participate, you have the right to refuse to answer any question or to refuse participation in any activity, at any time.

Contact information

Student researcher: James Cook
Graduate Student, Department of City Planning, Faculty of Architecture, University of Manitoba

Research supervisor: Dr. Orly Linovski
Assistant Professor, Department of City Planning, Faculty of Architecture, University of Manitoba

Statement of Consent

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

This research has been approved by the Joint-Faculty Research Ethics Board (JFREB) If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator. A copy of this consent form has been given to you to keep for your records and reference.

If you agree to each of the following, please place a check mark in the corresponding box. If you do not agree, leave the box blank:

. I have read or it has been read to me the details of this consent form.

. My questions have been addressed.

. I, _____ (print name), agree to participate in this study.

. I agree to have the interview audio-recorded and transcribed.

. I agree to be contacted by phone or email if further information is required after the interview.

. I agree to have the findings (which may include quotations) from this project published or presented in a manner that reveals my identity.

Do you wish to receive a summary of the findings?

How do you wish to receive the summary?

Address:_____

Participant's Signature _____ Date _____

Researcher's Signature _____ Date _____